

Economic Value and Benchmarking Study of the **Dallas Park System**

FEBRUARY 2016

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EXECUTIVE SUMMARY

On behalf of The Dallas Park and Recreation Department (DPR), HR&A Advisors, Verdunity, and the Trust for Public Land (together, the “HR&A Team”) conducted this study of the value of the Dallas park system and its performance compared to other cities’ park systems. All over the country, there is a growing awareness of the value that parks create for their users and communities. In addition to serving as places for communities to play, parks are an increasingly important part of many regional economic development strategies. Parks can attract and sustain healthy residential and business communities, enhance the local real estate market, sustain a vibrant tourism economy, reduce the cost of providing other municipal services, and provide tangible wellness benefits to users. These and other benefits have been widely demonstrated over the past 20+ years of scholarship, and their application to Dallas is described in greater detail in the body of this report.

The goals of the study were to:

- Estimate the **economic value of the Dallas park system** to the citizens of Dallas
- Describe the **economic rationale for future investment** in the park system; and
- Identify and recommend **best practices and opportunities** that can enhance the park system’s economic value.

This report includes two distinct analyses:

- A **Benchmarking Analysis** that compares the assets, resources, management and uses of the Dallas park system to those of nine peer systems across the country, and
- An **Economic Value Analysis** that estimates the current economic value of the park system and describes the potential value of future investments.

\$678M

**Annual Economic Value
Generated by Dallas Parks**

\$306M

**Annual Tourism Benefit
Created By Dallas Parks**

\$119M

**Real Estate Premiums
Generated by Parks**

SUMMARY OF FINDINGS

This study clearly demonstrates that Dallas' parks create enormous value, and that additional resources are needed to sustain and enhance this value. This summary outlines the study's principal findings; please refer to the full report and its appendix for additional details.

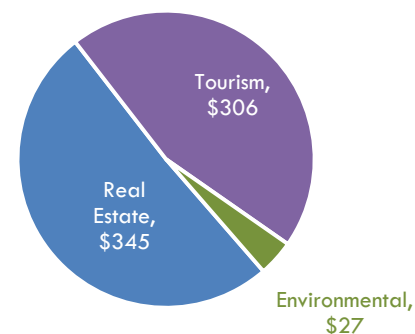
1. Every year, Dallas Parks return \$678 million to the local economy, a 7:1 return on public investment (ROI).

The HR&A Team quantified three of the Dallas Parks System's value drivers: Real Estate, Tourism, and Environmental value. The largest of these, the park system's ability to attract new real estate development and increase property values in neighborhoods adjacent to parks, accounts for more than half of the park system's total economic value - \$345M per year out of a total of \$678M.

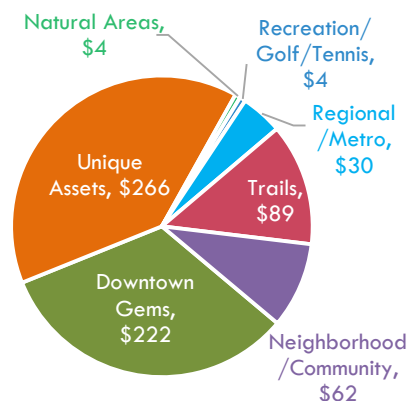
2. The Dallas Parks System is under-resourced relative to peer park systems, with approximately 40% less invested per city resident than its peer set.

Over the last three years, the Department of Park and Recreation (DPR) spent an average of only \$49 per resident on park operations and an average of only \$14 per resident on capital investments, well below a median of \$79 in operations spending and \$25 in capital spending per resident among peer park systems. These resource constraints have left the park system with \$3 billion in unfunded capital needs. Additional investment in parks, at or approaching the level of investment in peer park systems, can offset deferred maintenance needs and increase the economic benefits that parks create.

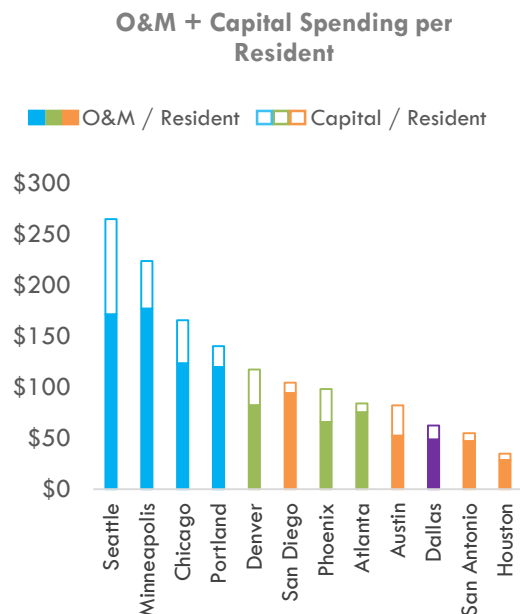
VALUE GENERATED BY VALUE DRIVER
in millions



VALUE GENERATED BY PARK TYPOLOGY
in millions



EXECUTIVE SUMMARY



Earned income refers to an array of strategies that park operators can adopt to make up a portion of their operations and maintenance expenses by activating their spaces. Examples include paid park programming, on-site concessions, and sponsorship opportunities.

3. Despite its economic circumstances, DPR has maintained a robust offering of park programs and assets, indicative of its judicious approach to spending and its entrepreneurial spirit in pursuing alternative funding and operational strategies.

Dallas has stretched its limited public resources with innovative funding and management strategies, some of which are also exhibited by peer park systems.

Dallas parks have benefitted greatly from private capital funding. DPR collaborates with numerous “Friends of” organizations that provide both capital and operations funding and are often responsible for consistent maintenance and improvements. Klyde Warren Park, one of the city’s Downtown Gems, received \$55 million in private contributions, covering half of its total cost of \$110 million. Today, the park continues to benefit from contributions from the Woodall Rodgers Park Foundation.

DPR also benefits from an entrepreneurial approach to earned income, and already owns a number of unique assets, such as the Dallas Arboretum and the Dallas Zoo, which derive a significant portion – between 35% and 95% – of their annual operating budgets from earned income.

Some stakeholders suggest that the public-private collaboration process can be cumbersome, particularly for grassroots organizations. DPR may be able to improve its ability to raise or earn private funds by streamlining its public-private agreements process and by better tracking its own performance.

4. Trails generate the highest Return on Investment of any park typology, over 50:1 in the last 18 years.

Dallas residents are particularly attracted to real estate near Trails due to their recreational connectivity, resulting in a price premium for homes adjacent to or within a short walk of Trails. Well-planned urban Trails can bolster social equity, serve as a catalyst for development and positively affect the value of adjacent properties. In addition, the fact that Trails are linear means they touch more properties per acre than other park typologies, greatly maximizing their value. Community and Neighborhood Parks linked to Trails may create more value than those that are not linked; therefore, Trail investments may offer a significant opportunity to unlock additional value in existing park assets.

This suggests that DPR should continue to invest in its proposed Circuit Trail to link neighborhoods and parks citywide. From a value creation point of view, we believe an investment in a connected trail system is the single most important investment that Dallas could make.

5. Dallas parks are among the region's highest value tourist assets, and generate over \$300 million in annual tourism value.

These assets include: The Dallas Zoo, Dallas Arboretum, Fair Park and Downtown Gems like Klyde Warren Park. The State Fair of Texas at Fair Park, the single largest component of the Tourism Value generated by parks, generates approximately \$202 million in annual economic value.

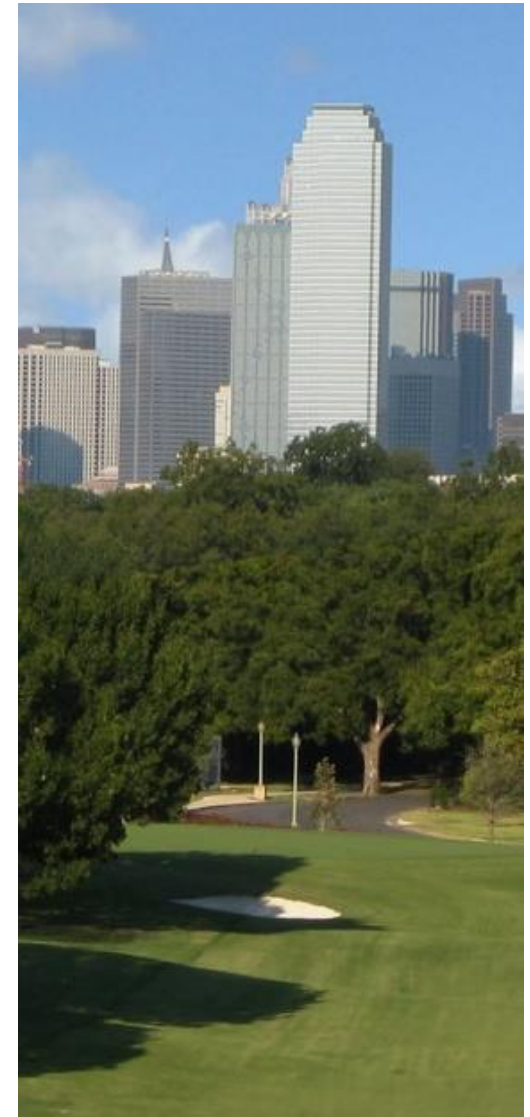
Additionally, parks support the success of other investments in tourism. Millennials, and increasingly other demographic cohorts, seek walkable environments supported by parks; as a result, park investments in downtowns can support increases in tourist visitation and spending.

DPR should continue to foster the success of major park assets as tourism drivers by targeting these sites for investment.

6. Dallas parks generate \$119 million in park premiums annually (i.e. increased property value due to the proximity of a park); community and Neighborhood Parks account for approximately 50% of the total.

Of the Park Typologies studied (refer to page 10 for a description of each typology), Community and Neighborhood Parks create the highest Park Premiums, nearly \$60 million. This is a function of the sheer number of Community and Neighborhood Parks – 237 in total. DPR should continue to celebrate and preserve Community and Neighborhood Parks as a primary source of real estate value to most Dallasites.

This suggests that DPR should continue to support and strengthen its community parks, particularly with enhanced programs and facilities that are tailored to the neighborhoods that they serve. Parks that support a higher level of programming generate greater real estate value than those parks that do not. A survey of the Dallas park system suggests that the presence of programming in parks, rather than the existence of parks per se, drives real estate value creation.





7. Parks function as green infrastructure, generating \$26.5 million in environmental value annually. This value could be enhanced through further green design interventions, with an expected ROI of approximately 2:1.

Dallas parks' environmental is comprised of the following four impacts:

- \$1.8 million in Flood Risk Mitigation, the capacity to store and infiltrate stormwater runoff;
- \$6.5 million in Heat Mortality Rate Reduction, the overall reduction in temperature and related mortality rates, owed to the tree canopy and green space of the parks;
- \$8.1 million in Water Quality Improvement and Wetlands Value, expected positive impact on the water quality in the receiving stream and its intended use; a
- \$10.2 million in Air Quality and Carbon Sequestration Services, quantities of carbon sequestration and air pollution absorption from the parks and trails system combined with the social costs of carbon and air pollution mitigation.

DPR should work to enhance existing natural systems to improve environmental performance **and, in doing so, increase the quality and value of benefits that parks provide to local ecosystems**. Each dollar invested in green infrastructure retrofits generates between \$1.10 and \$3.30 in Environmental Value. DPR should retrofit parks and open space with green infrastructure, which will not completely eliminate flooding and water quality impacts related to urbanization but will significantly mitigate some of the impacts and create value within the surrounding community.

8. While parks of all types create value in all communities, a handful of park and trail assets generate particularly significant value to the citizens of Dallas. Where possible, aspects of these best practices should be replicated to continue to enhance the ROI of the Park system.

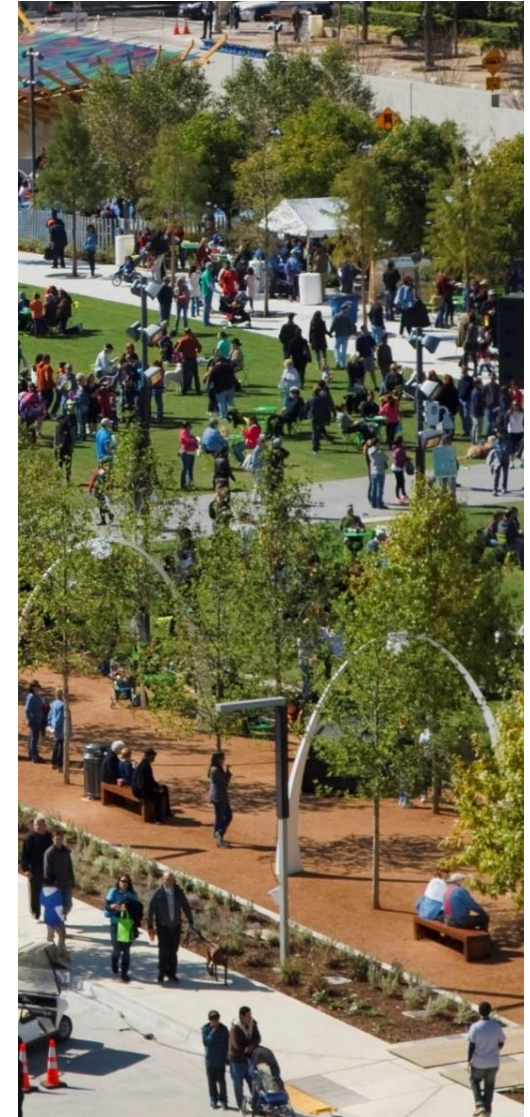
The \$23 million capital investment to build the 3.5-mile **Katy Trail** has resulted in approximately \$907 million in Park-Oriented Development. In Uptown and Oak Lawn, approximately \$880,000 in real estate value per acre has been created over the previous 18 years. This figure jumps to \$1.9 million within a ¼ mile of the 3.5-mile Katy Trail. As development along the Trail continues, Friends of Katy Trail and other advocates are considering new strategies to ensure that dense new development around the trail supports and preserves the trail experience, promotes additional development and potentially provides an additional platform for its funding.

Klyde Warren Park attracted an incremental \$900+ million in Park-Oriented Development in the six years following its initial \$110M capital funding. Between 2009 and 2014, the area within ¼ of a mile saw \$1.1 million of residential development per acre per year, compared to roughly \$133,000 per acre per year in the surrounding neighborhoods. Klyde Warren Park also attracted significant commercial development, averaging approximately \$2.2 million more development per acre per year within a ¼-mile radius than in the surrounding neighborhoods. Nearby land values have also increased from \$125/SF to \$250/SF or higher over the past decade and additional value is anticipated in coming years.

CONCLUSION

Although currently underfunded, the Dallas Parks system returns \$678 million to the local economy – a full 7:1 return on public investment. As the Dallas Park and Recreation department plans for the system's future, it now has an opportunity to make well-informed strategic decisions about funding park initiatives to maximize the economic value created. For instance:

- An overall increase in funding, particularly for operations and capital repairs, can offset deferred maintenance and sustain this enormous value.
- Given the enormous value that they create, the network of Dallas's trails should be prioritized.
- The City should prioritize Neighborhood Parks, which create value for all Dallasites, and focus on efforts to support their value through linkages to the trail network and enhanced, neighborhood-responsive programming.
- Major economic assets – both unique assets and downtown parks – drive outsized economic benefits. Proposals for future such proposals should be carefully evaluated from an economic perspective and prioritized where there is an opportunity for high return on public investment. Leveraging value for funding (e.g., through TIF) can help to bring these projects to life.





Dallas Park & Recreation



City of Dallas Park and Recreation Department (DPR)

The Dallas Park System is one of the largest municipal park systems in the country with over 23,249 park land acres which encompass 380 parks, 41 recreation centers, 17 pools, 10 spray grounds, one aquatic center, 13 lakes, 4,400 surface acres of water and 144 developed trail miles. DPR manages these park assets along with a multitude of diverse facilities and recreational programs. DPR commissioned HR&A Advisors and its subconsultants to prepare this study and provided tremendous support in the data collection process of the project.

HR&A Advisors, Inc. (HR&A)

HR&A Advisors is a real estate and economic development consulting firm with national expertise in quantifying the value of public space and in leveraging that value to support park investment. HR&A has conducted economic analysis and business planning to support major public investments including the High Line in New York City; Romare Beardon Park in Charlotte; the 4,000-acre Shelby Farms Park in Memphis; and the downtown Austin Parks. HR&A also brings significant experience across Texas and understands the unique planning and public policy context for park valuation in Dallas. HR&A led the Team that produced this report on behalf of DPR

and conducted the real estate, tourism, city building and local impacts analyses.

Verdunity

Verdunity is a Dallas-based, woman-owned civil engineering, urban design and community consulting firm focused on providing infrastructure planning and design services that help create healthy, economically sustainable communities. Verdunity led the environmental benefits valuation, implemented the ENVISION™ system and provided on-the-ground project assistance in Dallas.

Trust for Public Land (TPL)

TPL and its Center for City Park Excellence (CCPE) leads the nation in research on urban parks. Since 2006, CCPE has performed economic value studies for a host of cities across the nation. TPL led the benchmarking chapter of the study, sharing access to the country's best database of park system benchmarks. Additionally, Peter Harnik, the Director of CCPE, advised DPR on the prioritization of park investments.

ACKNOWLEDGEMENTS

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Introduction

Image: Dallas Arboretum

INTRODUCTION

\$678M

**Annual Economic Value
Generated by Dallas Parks**

\$80M

**Total Annual Operational
Spending (3-yr Avg.)**

\$16.7M

**Total Annual Capital
Spending (3-yr Avg.)**

PROJECT CONTEXT

There is a growing national recognition of the value that parks create for their users, communities, and regional economies. In addition to serving as a place for a community to play, parks are an increasingly important part of many regional economic development strategies. Parks can attract and sustain healthy residential and business communities, enhance the real estate market, sustain a vibrant tourism economy, reduce the cost of providing other municipal services and provide tangible wellness benefits to users. These and other benefits have been widely demonstrated over the past 20+ years of scholarship, and their application to Dallas is described in greater detail in the body of this report.

Despite the incredible value that parks create – **\$678 million annually** in Dallas, which is well in excess of capital and operating costs – park stewards often struggle to attract capital and operations funding. The Dallas park system is especially under-funded compared to its peers using nearly every metric (see page 17). In recognition of both the value of parks and the park system's resource constraints, private Dallasites have been

enormously supportive of the system, providing millions of dollars and over 150,000 volunteer hours per year.

On behalf of The Dallas Park and Recreation Department (DPR), HR&A Advisors, Verdunity, and the Trust for Public Land (the HR&A Team) conducted this study of the value of the park system and its performance compared to other cities' park systems. The goals of this study were to:

- **Estimate the economic value of the Dallas park system;**
- **Describe the economic rationale for future investment; and**
- **Identify and recommend best practices and opportunities that can enhance the park system's economic value.**

For the purposes of this study, we analyze all assets owned and/or managed by DPR. In select cases, we have also included major open space assets owned and/or managed by other departments of the City of Dallas. This study was conducted in tandem with the Parks Master Plan to identify future capital investment priorities and advance those priorities as part of future City capital programs.

PARK SYSTEM ASSETS & OPERATIONS

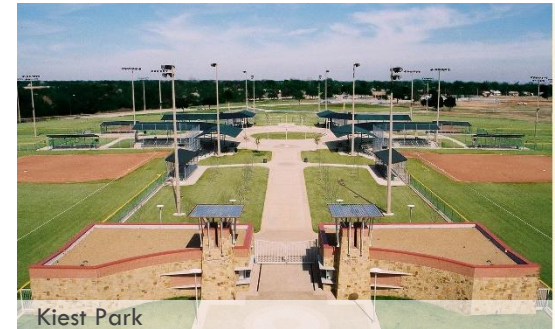
DPR owns over 600 assets including parks, trails and recreation centers. These include over 200 sports fields, 41 recreation centers, and many other assets located in every neighborhood across the city. DPR also owns some of the city's most cherished civic assets – the Dallas Zoo, the Dallas Arboretum and Fair Park, which contains the largest collection of Art Deco buildings in the country. Klyde Warren Park, which is owned by DPR and managed by the Woodall Rogers Park Foundation, is one of the nation's most celebrated urban parks and was recently awarded the prestigious Urban Open Space Award by the Urban Land Institute. Dallas also has one of the country's largest urban natural areas, the Trinity River Corridor and Great Trinity Forest; though currently not managed by DPR, the Trinity is nonetheless a remarkable park asset that benefits the citizens of Dallas.

Parks under DPR management vary in size from less than one acre to over 1,000 acres (White Rock Greenbelt South). The most visited parks include Fair Park (5.3 million visitors in 2014), Klyde Warren Park (1 million visitors in 2014), the Dallas

Arboretum (980,000 visitors in 2014) and the Dallas Zoo (943,000 visitors in 2014).

DPR employs approximately 1,000 people and manages an operating budget of roughly \$80 million. DPR did not receive any new capital funding for the 2014-2015 fiscal year; however, DPR has a 3-year average capital expenditure of \$16.7 million as a result of a 2006 bond that provided \$343 million for capital improvements, new park development and major maintenance across park typologies; and a 2012 transportation bond that provided \$27.6 million in funding for trail improvements.

DPR estimates that the park system has over \$3 billion in deferred maintenance and other capital needs. Despite the absence of additional capital funding for this year and relatively low levels of capital and operating funding in previous years (see Benchmarking, page 17), DPR has maintained a robust offering of park programs and assets, indicative of its judicious approach to spending and an entrepreneurial spirit in the pursuit of alternative funding and operational strategies.



Kiest Park



Belo Garden



White Rock Lake Trail

INTRODUCTION

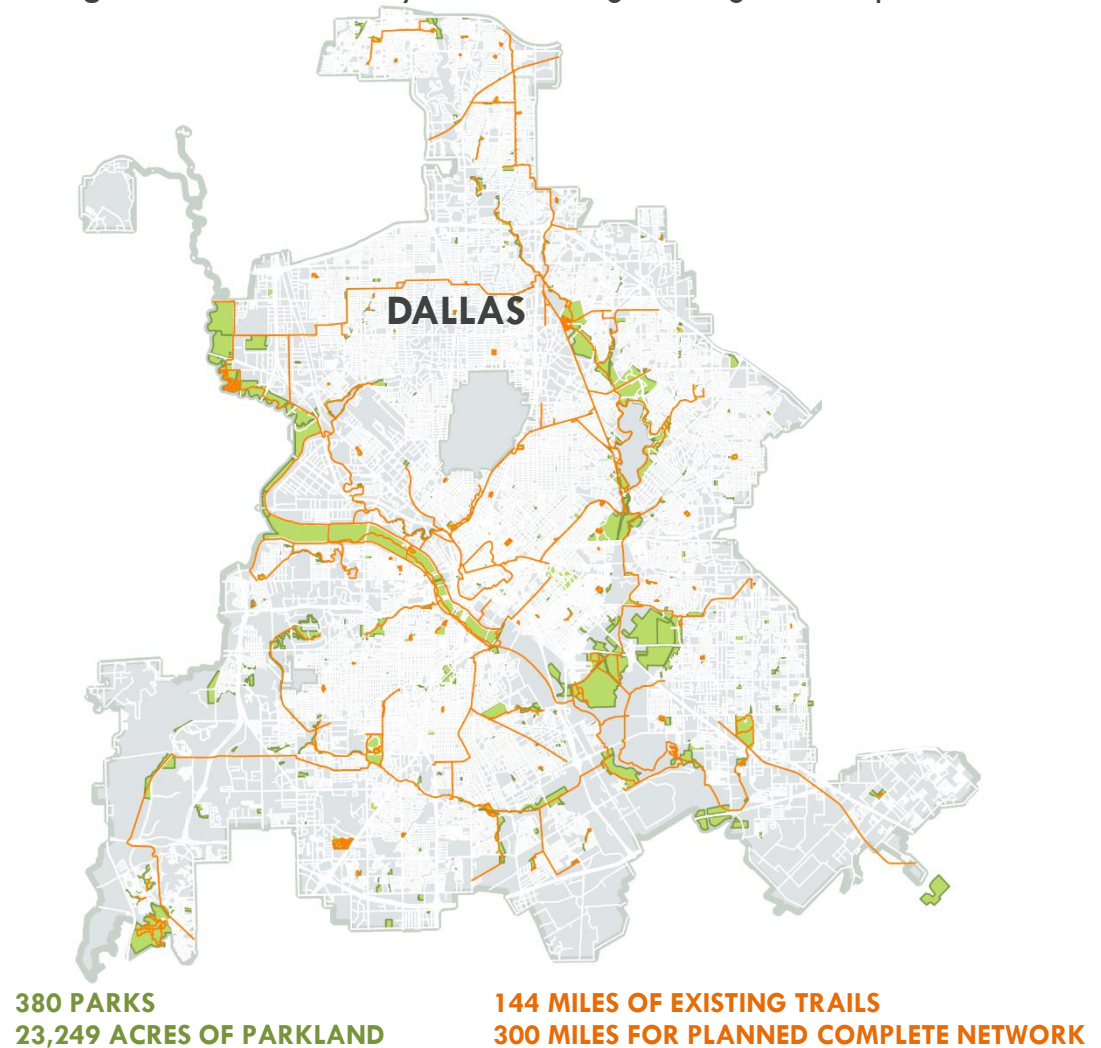
For instance, DPR collaborates with numerous “Friends of” organizations that provide both capital and operations funding and are often stewards of consistent maintenance and improvements. In recent years, the Woodall Rodgers Park Foundation has stewarded the development and operations of Klyde Warren Park, providing \$120 million in private funds over 6 years. The Friends of Katy Trail has privately raised over \$15 million in funding for developing and improving the trail. Other parks, such as the Arboretum, Cedar Ridge Preserve and the Trinity River Audubon Center, are overseen by private entities. The Arboretum has an operating budget of approximately \$20 million, nearly all of which is raised or earned by its management organization, Dallas Arboretum & Botanical Society, Inc.

METHODOLOGY

This report includes two distinct analyses:

- A **Benchmarking Analysis** that compares the assets, resources, management and uses of the Dallas park system to nine peer systems across the country, and
- An **Economic Value Analysis** that estimates the current economic value of the park system and describes the potential value of future investments.

Figure 1: Dallas Park System Including Existing and Proposed Trails



Parks generate a range of benefits. For purposes of this study, the HR&A Team focused on five categories (Categories) of economic value (Value) for which there are established, nationally-recognized economic estimation methodologies; a strong, demonstrable impact; and/or an opportunity to tap quantitative benefits for future funding or resources. These Categories are: Real Estate, Environment, Tourism, Local Spending and City Building.

1. **Real Estate:** Includes two benefits: a) the increased value of existing properties located near parks (Park Premiums) and b) the value of new development induced by parks (Park-Oriented Development). The HR&A Team estimated this value by consulting national literature, interviewing Dallas-based real estate brokers, undertaking GIS analysis of the density of value surrounding different types of park assets and analyzing real estate market pricing data and development trends surrounding specific park case studies.
2. **Environment:** Municipal savings associated with stacked function parks (i.e., parks that do double-duty as

municipal utilities) and broader environmental benefits (e.g. air quality) associated with green space. Verdunity estimated this value using GIS analysis of the overlay of parks and other infrastructure for select case study parks.

3. **Tourism:** Incremental spending associated with out-of-region visitors to parks. HR&A estimated this value based on out-of-region visitation to select park destinations; tourism data for the Metroplex was provided by the Dallas Convention and Visitors Bureau.
4. **Local Spending:** The economic value of direct investment in and income to DPR as it cycles through the local economy. HR&A estimated this value using budget data from DPR and its partners and then conducting IMPLAN input-output analysis. IMPLAN (IMpact Analysis for PLANning) is a third-party input-output analysis model with regional-specific economic value multipliers. Smaller benefits associated with volunteerism and user benefits are also included in this section. This benefit is not included in the total value created by Dallas parks.

5. **City Building:** Includes two benefits: a) the economic value of residents and businesses attracted to Dallas by its park system, and b) the qualitative social and community value of parks. HR&A suggested the potential for City Building through business attraction and residential growth trends in Dallas and peer cities. All economic competitor cities have park systems superior to Dallas's in capital and operations funding; therefore, we describe the value of residents and businesses attracted by future park investment based on case studies of growth in other cities across the country.

For each of these categories, we have identified key findings and implications for DPR. The lone exception is local spending, whose benefits relate to and depend on categories 1-4. Each of these categories can be effectively estimated independently of the others. Additional data on the specific methodology employed for each Category of Value is described in the relevant chapters for each.

INTRODUCTION

TABLE 1: Categories of Economic Value

REAL ESTATE

ENVIRONMENT

+ TOURISM

TOTAL QUANTIFIABLE BENEFITS OF PARKS

ADDITIONAL BENEFITS

CITY BUILDING

VALUE OF LARGE FIRM RELOCATIONS
TO DALLAS

+

VALUE OF ESTIMATED SOCIAL IMPACT
OF PARKS

LOCAL SPENDING

VALUE OF DPR O&M AND CAPITAL
SPENDING

+

VALUE OF EARNED INCOME AT MAJOR
ATTRACTIONS

REAL ESTATE

VALUE OF PROPERTIES
ADJACENT TO PARK

+

VALUE OF NEW DEVELOPMENT NEAR PARK

ENVIRONMENT

VALUE OF ENVIRONMENTAL SERVICES

+

ENHANCED GREEN INFRASTRUCTURE VALUE

TOURISM

VALUE OF PARK ATTENDANCE FROM DAY VISITORS

+

VALUE OF SPENDING FROM OVERNIGHT VISITORS

All parks create value, but each park creates different Categories and amounts of value. DPR oversees numerous assets ranging in size and character. In order to isolate and appropriately measure the park system's economic value, the HR&A Team segmented the Dallas park system into the following typologies that roughly correspond to those used by DPR:

1. **Metro and Regional Parks:** The largest assets by area – generally over 100 acres – typically feature multiple athletic fields, picnic areas and other amenities. They are few in number and serve large regions of Dallas.
2. **Community and Neighborhood Parks:** These assets are smaller in size – generally between one and 100 acres – but larger in number. They serve smaller areas than Metro and Regional Parks.
3. **Recreation Centers:** Indoor and outdoor facilities for organized sporting events, such as basketball and swimming. These facilities are often situated within Metro and Regional Parks and Community and Neighborhood Parks. For purposes of this study, notwithstanding their co-location, their Value was separately estimated because they create different categories of Economic Value.

4. **Downtown Gems:** Highly designed, programmed, and utilized park assets, such as Klyde Warren Park and Belo Garden, located in high-density, accessible, and walkable environments.

5. **Unique Assets:** Destination assets that are unique to both DPR and the city, such as the Dallas Zoo, the Dallas Arboretum and MoneyGram Park. Fair Park, also a Unique Asset, generates significant economic value in its present form, and effective investment could significantly increase this economic value. In recognition of this economic opportunity and of importance of Fair Park to Dallas, the City of Dallas has initiated a planning process to define a strategic investment plan for the park's future. This builds upon the Fair Park Master Plan completed by Hargraves Associates in 2003. The City's Task Force produced a preliminary report in April which recommended restoring the historic structures and pursuing public-private management. The report's recommendations were approved by the Dallas Park and Recreation Board in May.

6. **Trails:** Linear assets that primarily serve a mobility or active recreation function. They often link to other DPR assets. The

level of design and infrastructure varies significantly among trails.

7. **Golf Courses and Tennis Courts:** City-owned golf courses and tennis facilities, sometimes associated with Metro and Regional Parks or Community and Neighborhood Parks.

8. **Natural Areas:** Open space with no current investment in infrastructure for active use.

The graphic on the next page describes the types of economic benefits calculated for each of the park typologies. The HR&A Team's analyses produced outputs of present day economic value as recurring annual impacts.

Additionally, we describe the potential Value of future or contemplated park investments (Potential Impact) as part of a separate estimate. As described above, the quantitative Value of City Building is included as a Potential Impact only.

At the conclusion of each Value analysis, we summarize key findings and their respective implications, with the exception of Local Spending Impacts, which depend on the other categories.

INTRODUCTION

TABLE 2: Park Value by Typology		Real Estate	Environment	Tourism	Local Spending	City Building
	Metro / Regional Parks	✓	✓			
	Downtown Gems	✓		✓		✓
	Community / Neighborhood Parks	✓	✓			✓
	Unique Assets			✓	✓	
	Recreation Centers				✓	✓
	Golf Courses & Tennis Courts	✓	✓		✓	
	Linear Parks / Trails	✓	✓			✓
	Natural Areas	✓	✓			

The HR&A team calculated economic value by Category of Value (columns) and Park Typology (rows). Check marks indicate the focus of this study based on the unique value profile of parks in Dallas and its urban context.

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Benchmarking Assessment

Image: Portland's Pearl District

BENCHMARKING

REGIONAL PEERS

HOUSTON, TX
AUSTIN, TX
SAN ANTONIO, TX
SAN DIEGO, CA

ECONOMIC COMPETITOR PEERS

ATLANTA, GA
DENVER, CO
PHOENIX, AZ

ASPIRATIONAL PEERS

CHICAGO, IL
MINNEAPOLIS, MN
PORTLAND, OR
SEATTLE, WA

OVERVIEW & METHODOLOGY

The HR&A Team benchmarked Dallas's park assets, activities and resources against those of the park systems of eleven peer cities across the country. The goal of this exercise was to identify areas of relative strength and weakness of the Dallas park system in order to inform opportunities for future investment and best practices in management.

In consultation with DPR and local economic experts, the HR&A Team identified cities in three cohorts, defined below, against which we benchmarked DPR for levels of park assets, programmatic offerings, public capital and operations investment and management strategies (collectively, the "Peer Set," each a "Cohort").

- **Regional Peers:** Cities of comparable size, climate, and geography to Dallas, namely Houston, Austin, San Antonio and San Diego.
- **Economic Competitor Peers:** Cities with similar economic compositions, park needs and availability of resources, namely Atlanta, Denver and Phoenix.
- **Aspirational Peers:** Cities to which Dallas may aspire in terms of amount and quality of park assets, programming and operational resources, namely

Chicago, Minneapolis, Portland and Seattle.

The HR&A Team gathered benchmarking data on city and geographic context, parkland, financials from DPR's peer municipal park agencies, park facilities and amenities and numbers of partnerships and volunteer hours. Detailed data on park programming, asset ownership and public-private partnerships among the Peer Set were not available and therefore not used in this analysis.

The HR&A Team used data collected through the Trust for Public Land's annual City Park Survey of Dallas and other Peer Set cities. Unless otherwise noted, all figures include data from all public park and recreation agencies within a city's boundaries (i.e. municipal, county, regional, state and federal park agencies). Private parks, such as facilities owned by homeowners associations, country clubs, or YMCAs, Boys and Girls Clubs etc., are excluded from these calculations. Private spending on parks, spending on professional stadiums, zoos, museums, aquariums, cemeteries and recreation by non-profits (including park foundations and conservancies) are also excluded from calculations.

TABLE 3: Peer Set Identification Metrics

City	Population	Annual Pop. Growth	Economic Drivers	Climate
Dallas	1,260,000	0.07%	Energy, Corporate	Humid subtropical
Houston	2,200,000	0.60%	Energy, Healthcare	Humid subtropical
Austin	890,000	1.75%	Tech, Education	Humid subtropical
San Antonio	1,410,000	1.52%	Military, Energy, Finance	Humid subtropical
San Diego	1,360,000	0.68%	Military, Tourism, Biotech	Semi-arid
Atlanta	450,000	0.08%	Media, IT, Corporate	Humid subtropical
Denver	650,000	0.82%	Distribution, Defense, Tourism	Semi-arid continental
Phoenix	1,510,000	0.94%	Finance, Manufacturing	Hot desert
Chicago	2,720,000	-0.68%	Finance, Corporate	Humid continental
Minneapolis	400,000	0.00%	Commerce, Distribution	Humid continental
Portland	610,000	1.04%	Distribution, Apparel	Mild temperate
Seattle	650,000	0.80%	Tech, Tourism	Temperate marine
Median	1,070,000	0.88%		

Sources: US Census Bureau (2000-2010); HR&A; Koppen Climate Classification

The HR&A Team also evaluated the economic value of the Dallas park system against the four Peer Set park systems for which recent economic studies have been conducted. The annual economic value of the Dallas park system (\$678 million) is at the high end of the range of value identified for Peer Set park systems. Moreover, this value is more evenly distributed among Value Categories, with higher values than many peers in Categories that generate direct monetary benefits to residents (e.g. Real Estate).

- **Chicago:** Conducted in 2015 by Civic Consulting Alliance, Global Economics Group and Roland Berger Strategy Consultants. This analysis included Local Spending, Real Estate (Park Premiums only) and Tourism. The annual value of these impacts is approximately **\$1.4 billion**, of which the vast majority is from tourism and local spending. The size of the Chicago Park System and of the Chicago tourism economy (and the prominent role of parks in tourism) may account for these findings.
- **Seattle,** conducted in 2011 by the Trust for Public Land, includes Real

BENCHMARKING

Estate (Park Premiums only), Tourism, Environmental (Stormwater and Air Pollution) and three additional sources of benefit not estimated in this study: Direct Use, Community Cohesion, and Health. The annual value of these impacts is roughly **\$700 million**, of which the single largest factor is the recreational value to Seattle residents. The smaller size of the Seattle Park system, the lower level of activity in Seattle's real estate market, and different methodologies may drive a lower total Value.

- **Denver**, conducted in 2010 by the Trust for Public Land, used the same methodology as described above for Seattle. TPL estimates park value of over **\$500 million** annually.
- **San Diego**, conducted in 2008 by the Trust For Public Land, employs a similar methodology as in Denver and Seattle. San Diego Parks have an annual value of economic impacts of over **\$1.3 billion** according to this study, of which ~85% is from "direct use"/recreational value.

TABLE 4: Comparison by Public Expenditure
(3-year averages, ranked by O&M per resident)

City	Public Expenditure on O&M per Resident	Public Expenditure on Capital per Resident	Total Public O&M Expenditure* (in millions)	Total Public Capital Expenditure (in millions)
Minneapolis	\$177	\$47	\$69.3	\$18.4
Seattle	\$171	\$93	\$108.3	\$59.3
Chicago	\$123	\$42	\$334.6	\$114.4
Portland	\$120	\$20	\$71.8	\$12.1
San Diego	\$94	\$11	\$125.5	\$14.1
Denver	\$82	\$35	\$51.6	\$21.6
Atlanta	\$75	\$9	\$32.9	\$3.9
Phoenix	\$66	\$32	\$97.6	\$47.6
Austin	\$52	\$30	\$44.3	\$25.4
Dallas	\$49	\$14	\$59.9	\$16.7
San Antonio	\$47	\$8	\$64.8	\$10.9
Houston	\$28	\$6	\$61.3	\$13.3
Median	\$79	\$25	\$67.1	\$17.6

*Does not include funding for stadiums, zoos, museums, aquariums and cemeteries

23,249

Acres of Parkland owned by DPR

(Increases to 26,399 with addition of
3,150 acres of Trinity River Greenbelt)

21.6

Acres of Parkland per 1,000 Dallas Residents

40%

Less Spending per Resident on O&M than Peer Cities

Both Austin and Phoenix have economic studies of select park assets (trails and State Parks), the methodology and findings of which generally conform to those described above.

KEY FINDINGS

DPR is vastly under-resourced compared to the Peer Set. Over the last three years, DPR spent an average of only \$49 per resident on park operations and an average of only \$14 per resident on capital investments, well below a median of \$79 in operations spending and \$25 in capital spending per resident in the Peer Set. Indeed, DPR's three-year average capital funding of \$14 per resident has contributed to over \$3 billion in deferred maintenance.

Compared to the Peer Set, DPR has received low 3-year average capital and operations funding. The Aspirational Peers Cohort averaged \$148 per resident in operations spending and \$51 per resident in capital spending, many times above DPR's \$49 per resident in operations and \$14 in capital spending.



Lochwood Park

At the same time that it is underfunded relative to the Peer Set, DPR maintains a larger inventory of assets than much of the Peer Set. DPR oversees 21.6 acres of parkland per 1,000 city residents, compared to a median of 19.8 acres among the Peer Set. Dallas parks also offer residents a competitive level of valuable amenities and programming such as recreation centers, youth-oriented activities and nature centers with educational programming.

Dallas offers a competitive amount of parkland when compared to its Peer Set.* DPR owns 23,249 acres of parkland, above a median of 20,000 across the Peer Set. Only Phoenix, Houston and San Diego offer more total acreage of parks.

BENCHMARKING

However, acreage may not be the most appropriate metric for system quality. Acreage has little to no correlation to park score or customer satisfaction. Park departments in the Aspirational Peers Cohort averaged just over 10,000 acres of parkland. Park departments in the Economic Competitor and Regional Peer Cohorts averaged 20,000 acres and 34,000 acres, respectively. Indeed, a wealth of assets and paucity of operating funds may describe current deferred maintenance challenges -- DPR has roughly \$3B in unfunded capital needs, as compared to \$1.4 billion in Houston, \$625 million in Chicago and \$267 million in Seattle.

Despite its large acreage, Dallas offers slightly fewer facilities and amenities ("Hardware," as defined in the Real Estate Chapter) than cities in the Peer Set. Dallas parks lag peer cities in multiple categories of facilities, such as baseball diamonds, dog parks, playgrounds, skate parks, swimming pools and restrooms. In comparison, park systems in the Aspirational Peers Cohort offer significantly more facilities on average, especially on a per acre basis, and in many categories, such as athletic fields, playgrounds and recreation, the Aspirational Peers Cohort has two to three times as many facilities as Dallas.

TABLE 5: Peer Cities' Park Amenities and Access
(Ranked by Park Land per 1,000 Residents)

City	Park Land per 1,000 Residents (in acres)	Park Land as Percent of City Land (in acres)	Percent of Residents ½ mi walk from Park
San Diego	35.7	23.5%	77.5%
Phoenix	32.5	15.0%	45.4%
Austin	30.6	14.5%	48.0%
Houston	24.1	14.3%	48.2%
Portland	23.7	17.7%	84.8%
Dallas	21.6	12.6%	57.8%
San Antonio	18	8.7%	33.6%
Minneapolis	12.6	14.9%	96.3%
Atlanta	11.5	6.1%	65.9%
Seattle	10	12.4%	92.9%
Denver	9.1	7.9%	86.4%
Chicago	4.6	9.1%	91.9%
Median	19.8	13.4%	71.7%

Dallas parks contain roughly the same amount of Hardware, however, as in the Economic Competitor Peers Cohort and slightly more than in the Regional Peers Cohort.

Additionally, despite its impressive inventory of assets, Dallas provides a lower share of its residents with a park in walking distance than most of the Peer Set. Approximately 54% of the city's population lives within a half mile of a park asset, well below a median of 70% among the Peer Set, although higher than the other two Texas cities in the Regional Peers Cohort. Although the auto-oriented, low-density character of Dallas may be less conducive to park access than that of other cities in the Peer Set, with a focus on trail access and other increased park investment, DPR could begin to close this gap. Further investment in the Integrated Trail Circuit as well as a partnership with the Dallas Independent School District for joint use of school district property to build new or enhance existing playgrounds may go a long way to improve park access.

Dallas has stretched its limited public resources with innovative funding and management strategies that are also exhibited by some of its Economic

Competitor Peers and the Aspirational Peers. Dallas parks have benefitted greatly from private capital funding. Klyde Warren Park has received \$55 million in private contributions, out of a total of \$110 million. The Park continues to benefit from contributions from the Woodall Rodgers Park Foundation.

Similarly, Millennium Park in Chicago received over \$200 million in private capital contributions over the past 11 years and Atlanta's BeltLine project has received \$40 million in private capital contributions over the past 10 years. Dallas's volunteerism also sets it apart from the rest of the Peer Set. Volunteers logged nearly 150,000 hours of service for Dallas parks, approximately 70% more than the median of its Peer Set. Only Portland, San Diego and Minneapolis logged more hours.

Anecdotally, DPR partnership structures can be cumbersome, especially for smaller "Friends Of" and neighborhood groups; streamlined agreement processes may better support philanthropic contributions. One model to consider may be Seattle's Waterfront Seattle, an effort by the City to assemble stakeholders into advisory councils utilizing a "Friends Of" structure to guide the planning of a \$1 billion waterfront

transformation, currently under construction.

DPR owns a number of unique assets such as the Dallas Arboretum and the Dallas Zoo which derive a significant portion – between 35% and 95% – of their annual operating budgets from earned income.

Despite a focus on earned income, marketing remains an underfunded DPR priority. Following budget cuts in prior decades, the department has worked to build back marketing capacity with an eye to leading peers across the country. Other cities have developed innovative approaches to marketing park programs. New York City's Department of Parks and Recreation, which has an entire division devoted to marketing, links residents with parks through a built-in transit access guide. Louisville Metro Parks teamed up with the Department of Health and Well-Being to launch the "Healthy Hometown Movement," using both departments' resources to fund and promote fitness classes in neighborhoods with the poorest health. Cincinnati, Denver, Minneapolis and Phoenix, among other cities, have teamed up with health insurers to market parks and recreation to local residents.

BENCHMARKING

KEY PERFORMANCE INDICATORS

Moving forward, DPR may benefit from tracking key performance indicators (KPIs) to measure how its prioritization of resources has affected the park system's value creation.

KPIs provide a measure by which DPR can measure the return it receives on its investment. KPI metrics are contained in ParkScore, a comprehensive measure generated by the Trust for Public Land. ParkScore metrics include **park acreage, median park size, facilities, operating expenditure and resident access.**

Beyond ParkScore, the following metrics may prove useful in tracking DPR's progress toward the recommendations outlined in this study. These include:

- **Hardware:** Total amount of Hardware, such as playgrounds and athletic fields, with year-to-year comparisons to identify net new programming.

- **Software:** Total amount of Software, including new programming across the various park typologies, with year-to-year comparisons to identify new event programming.
- **Visitation:** Approximate number of visitors, both free and paid, to park assets.
- **Environmental Area:** Acreage of parkland with new or retrofitted environmental capacities, such as permeable surfaces.
- **Concessions:** New concessions and other earned income opportunities.
- **Customer Satisfaction:** Annual survey conducted by the City of Dallas which includes a number of measures of residents' perception of park safety, quality and priority for city funding.

Figure 2: Population Density vs. Park Access

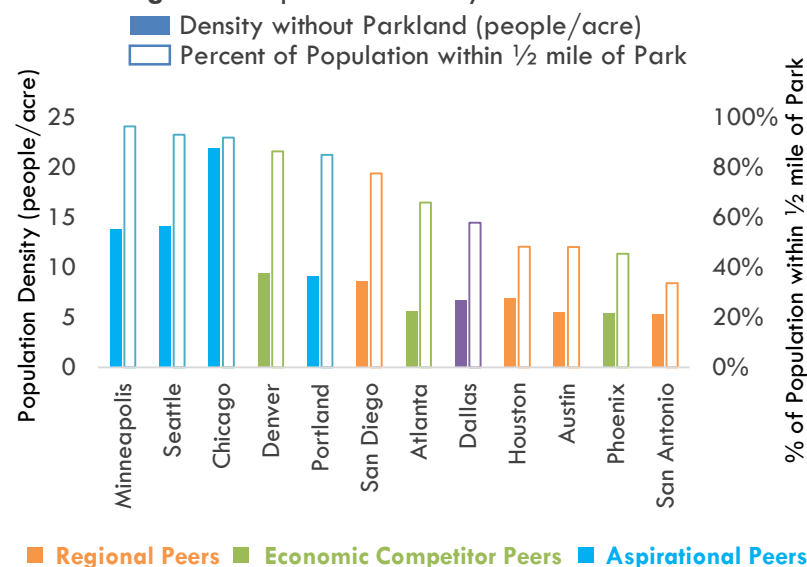
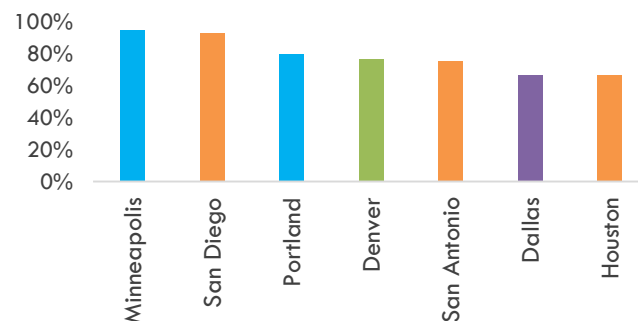


Figure 3: Resident Satisfaction Ratings of Municipal Parks and Recreation Systems*



*Resident satisfaction data not available for all Peer Set cities. Survey questions vary between cities and have been averaged in some instances.

KEY FINDINGS/IMPLICATIONS

Finding: DPR is vastly under-resourced compared to the Peer Set, with higher deferred maintenance and lower customer satisfaction.

- **Implication:** Over the long term, **increasing capital and O&M funds** will decrease the maintenance backlog and improve the overall quality and value of the park system.

Finding: While underfunded relative to the Peer Set, DPR maintains a relatively large inventory of assets.

- **Implication:** Focus investments on **quality of assets** rather than quantity of assets, and **develop alternative internal metrics** for measuring the quality of park system, such as level of programming.

Finding: Despite its large size, Dallas offers fewer facilities and amenities than cities in the Peer Set.

- **Implication:** **Investment in programming** “Hardware” and “Software” can greatly improve the quality of assets.

Finding: Dallas has an impressive inventory of assets but provides fewer residents with a park in walking distance than most of Peer Set.

- **Implication:** It should also continue to invest in **expanding and linking the trail system** and focus on completing the Integrated Trail Circuit, and develop an **innovative partnership with DISD** to make playgrounds accessible to the general public.

Finding: DPR has stretched its limited public resources with innovative funding and management strategies.

- **Implication:** DPR should seek additional public funds to **increase spending to Peer Set levels**.

Finding: DPR partnership structures can be cumbersome, especially for smaller partnership projects; streamlined processes may better support philanthropic contributions.

- **Implication:** **Predictable, easily-implemented public-private agreements** could facilitate more effective collaboration and fundraising.

Finding: Despite its focus on earned income, DPR devotes fewer resources to marketing than the leaders in its Peer Set.

- **Implication:** **Additional marketing funding** will increase park utilization and DPR revenue.





Economic Value Assessment

Real Estate

Image: Katy Trail, SWA

\$345M

Annual Real Estate Value Generated by Parks

Figure 4
Total Annual Park-Driven
Real Estate Value
(in millions)



OVERVIEW & METHODOLOGY

Dallas's parks are a part of the infrastructure network around which the city has developed – as critical to real estate development as roads and utilities. The most used parks in the system create the most value per acre due to the density they have attracted at their edges, the quality of that real estate development and real estate pricing that reflects the amenity parks create. Over time, a park's value can spread beyond the area within a short walking distance. This type of value is described in greater detail in the City Building section of this report.

The Dallas park system generates over **\$345 million** in annual Real Estate value across the city. This value is comprised of:

- Enhanced value of existing real estate surrounding parks ("**Park Premiums**"), equal to approximately **\$119 million**, and
- The increase in real estate development activity surrounding new or improved parks ("**Park-Oriented Development**")

equal to approximately **\$226 million**.

The HR&A Team estimated this value through a citywide analysis of private real estate value and recent development within a short walking distance of the most impactful park Typologies.

We estimated **Park Premiums** by utilizing a premium coefficient to attribute a portion of existing assessed real estate value within a small radius of six Typologies of parks (see p.15). Some park assets within the two categories not included in this Real Estate analysis (Recreation Centers and Unique Assets) may generate either positive or negative effects on their surrounding communities, but, on balance, these impacts are likely to be relatively small. We estimated premium coefficients based on national literature review, interviews with local real estate brokers and consultation with DPR.

We identified all residential properties within both a 750-foot buffer and a half-mile buffer. We inventoried their respective assessed valuations, assumed to be in line

HR&A consulted with the following literature for the Park Premium analysis: (1) Crompton, J and Nicholls, S. "The Impact of Greenways on Property Values: Evidence from Austin, Texas;" (2) Parent, O and vom Hofe, R. "Understanding the economic benefits of trails on residential property values in the presence of spatial dependence;" (3) Active Living Research. (2010, May). The economic benefits of open space, recreation facilities and walkable community design; (4) Crompton, J and Nicholls S. "An Assessment of Tax Revenues Generated by Homes Proximate to a Greenway;" (5) Lutzenhiser M and Netusil N. "The Effect of Open Space on a Home's Sale Price." Irwin E. "The Effects of Open Space on Residential Property Values." Land Economics; (6) Irwin E. "The Effects of Open Space on Residential Property Values;" (7) Geoghegan J. "The Value of Open Spaces in Residential Land use;" (8) Miller A. Valuing Open Space: Land Economics and Neighborhood Parks; (9) Asabere, P. K., & Huffman, F. E. (2009). The relative impacts of trails and greenbelts on home price. Journal of Real Estate Finance and Economics; (10) Campbell Jr., H. S., & Munroe, D. K. (2007). Greenways and Greenbacks: the impact of the Catawba Regional Trail on property values in Charlotte, North Carolina; (11) Dallas Area Realtors

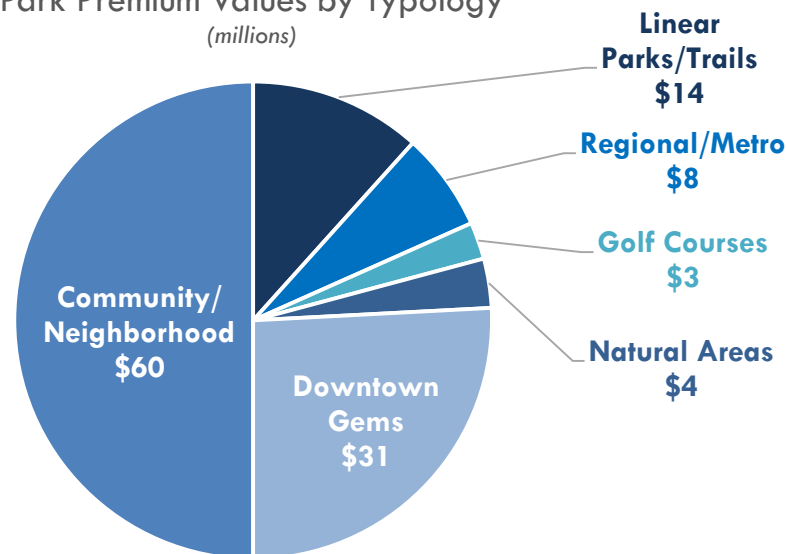
with market valuations. The 750-foot buffer serves as a proxy for two to three city blocks, the distance historically demonstrated to be the area of most substantial value creation by parks. The additional half-mile buffer reflects an area within which more modest value increment may accrue, especially given the car-oriented culture of Dallas, in which many residents may prefer to drive but can still reach a park within minutes. We then measured the percentage of all Dallas properties sold each year using 10-year historical averages and determined the amount of Park Premium value included in property transactions each year.

The HR&A Team analyzed **Park-Oriented Development** near both Downtown Gems and Trails, which have been the focus of recent capital investment in the Dallas park system. We analyzed recent development within a ¼ mile of two major investments — Katy Trail and Klyde Warren Park — and compared it to baseline development activity in the adjacent neighborhoods.

KEY FINDINGS

A windshield survey of the Dallas park system suggests that **the presence of**

Figure 5
Park Premium Values by Typology
(millions)



programming in parks, rather than the existence of parks per se, drives real estate value creation. This hypothesis is borne out by data from Dallas-based real estate brokers, national studies and independent analysis conducted by DPR and the Team. In many Dallas communities, the most attractive and well-maintained homes are concentrated along the “active” edge of parks — the edge closest to the playground or walking trail.

We tailored our analysis to reflect the level

of park programming, segmented into two components (1) “Hardware,” the physical infrastructure of a park, and (2) “Software,” programming that responds to available Hardware and the needs of the surrounding population.

Therefore, among parks of the same Typology, the parks with the most Hardware or Software are assumed to generate the highest Park Premiums.

- Downtown Gems generally offered a high level of Software, which correlated

TABLE 6

Park Premium Coefficients

Typical Dallas Programming

Typology	750 ft.	½ mile	Hardware	Software
Downtown Gems	12.5%	5.75%	HIGH	HIGH
Community / Neighborhood	3%	2.75%	LOW	LOW
Linear / Trails	5.75%	—	HIGH	N/A
Regional / Metro	3.25%	2.75%	MED	LOW
Golf Courses	3%	2.75%	HIGH	N/A
Natural Areas	3%	2.75%	N/A	N/A

strongly to their highest Park Premium.

- Community and Neighborhood Parks typically offered less Software than Downtown Gems and contained a range of levels of Hardware. This corresponds to their lower (but still significant) Park Premium.

Notably, the average level of Software correlates more closely with the Park Premium Coefficient than the level of Hardware, as indicated in Table 6.

Of the Typologies studied, Community and Neighborhood Parks create the highest Park Premiums, nearly \$60 million. This is a function of the sheer number of Community and Neighborhood Parks – 237 in total. The abundance of Community and Neighborhood Parks is one of the key positive drivers of Dallas’s Park Score (47.5.)

Figure 6: Real Estate Development along Central Park, New York, NY
~1860 and 2015



WHITE ROCK LAKE



White Rock Lake has supported stable and increasing property values in Dallas for over 30 years.

White Rock Lake is an anchor for both real estate development and outdoor recreation, and generates roughly \$2.3M in annual Park Premium Value. Buyers pay a premium to live near parks, especially those that facilitate fitness-related activities. A broker specializing in the White Rock Lake residential market noted that values of homes in neighborhoods adjacent to the lake (e.g. Lakewood) have tripled or more between 1980 and 2014. In fact, the broker noted that area homes have experienced a 20% increase in prices over the last three years, notably higher than the approximately 15% increase in prices across the Metroplex.

Trails generate the highest ROI of any Typology, over \$50:\$1. Local real estate brokers noted that Dallas residents are particularly attracted to real estate near Trails for their recreational connectivity, resulting in a price premium for homes adjacent to or within a short walk of Trails. While in the short-term, the process of retrofitting and upgrading Trails can cause consternation for local residents, well-planned urban Trails can serve as a catalyst for development and positively affect the value of adjacent properties. In addition, the linearity of Trails maximizes the number of properties benefitted relative to the Trails' acreage. Data was not readily available to assess market knowledgeable assertions and the observation that the value of Trails increases with linkages to other Trails and parks. Community and Neighborhood Parks linked to Trails may create more value than those unlinked; therefore, Trail investments may offer a significant opportunity to unlock additional value in existing park assets.

Downtown Gems generate the most total Real Estate Value, \$31 million in annual Park Premiums and an additional \$151 million of value in annual Park-Oriented Development. Klyde Warren, Pegasus Plaza, Belo Garden, Main Street Garden and Dealey Plaza are the Downtown Gems included in this analysis.

KATY TRAIL



The \$23 million capital investment to build the 3.5-mile Katy Trail has resulted in approximately \$907 million in Park-Oriented Development. In Uptown and Oak Lawn, approximately \$880,000 in real estate value per acre has been created over the previous 18 years. This figure jumps to \$1.9 million within a ¼ mile of the 3.5-mile Katy Trail. As development along the Trail continues, Friends of Katy Trail and other advocates are considering new strategies to ensure that new density supports and preserves the trail experience. Zoning overlays and trail-adjacent design guidelines can preserve light and air, public access and the urban fabric while promoting development and, potentially, providing an additional platform for its funding.

KLYDE WARREN PARK



Klyde Warren Park attracted an incremental \$900+ million in Park-Oriented Development in the six years following its initial \$110M capital funding.

Between 2009 and 2014, the area within $\frac{1}{4}$ of a mile saw \$1.1 million of residential development per acre per year, compared to roughly \$133,000 per acre per year in the surrounding neighborhoods of Downtown, Uptown and Oak Lawn. Residential development in the previous six years averaged \$133,000 per acre.

Klyde Warren Park also attracted significant commercial development, averaging approximately \$2.2 million more development per acre per year within a $\frac{1}{4}$ -mile radius than in the surrounding



neighborhoods. According to a local real estate broker, nearby land values have increased from \$125/SF to \$250/SF or higher over the past decade. Additional value is anticipated in coming years.

By uniting Downtown and Uptown across the 8-lane Woodall Rogers Freeway, the park has likely catalyzed additional value in both neighborhoods beyond a short walking radius.

As the park's usage – and value – far exceed initial expectations, park advocates including the Woodall Rogers Park Foundation are seeking new sources of funding, including the recently-created public improvement district, that monetize park value to support O&M costs.

Parks that support a higher level of programming generate greater real estate value than those parks that do not. When sited next to underdeveloped parcels, well-programmed Downtown Gems become anchors to support new dense, high-quality development.

When planned as part of a major neighborhood transformation, parks can generate a significant return on public investment. Capital and operating investment in parks can yield significant new real estate development, which can generate incremental property taxes that equal or exceed the park investment. Those investments can be supported by the City through routine bonding or facilitated through Tax Increment Financing or other value capture mechanisms. Three ingredients support a healthy return on the public investment:

- A **strong real estate market** that supports high density development,
- **Availability of proximate sites** for real estate development and
- A **high quality and distinctive park investment** that is uniquely suited to the vision for that community.

MIDTOWN COMMONS



Midtown Commons has the potential to catalyze a 40:1 return on park investment.

Plans are underway to transform the Valley View Center and Galleria Dallas area into a mixed-use development featuring 14 million SF of commercial, retail and entertainment uses as well as a variety of housing anchored by an 18-acre park called Midtown Commons.

Development of the park, including land acquisition, development and operations, is expected to cost between \$90 and \$130 million and will anchor a \$4 billion private investment in commercial and residential uses. The development's full build out is expected to take eight to ten years with a first phase including hotel, office, condominiums and multifamily residential, as well as a theater.

KEY FINDINGS / IMPLICATIONS

FINDING: The presence of programming in parks drives real estate value creation.

- **Implication:** *Invest in park programming* – both *Hardware and Software* – particularly in higher density areas, to support and increase Real Estate Value, and to create more interesting parks.

FINDING: Trails generate the highest real estate value ROI.

- **Implication:** *Trail investment* should be prioritized along key recreational corridors.

FINDING: Downtown Gems generate the most Real Estate Value overall and can anchor new high density development.

- **Implication:** *The public sector should align Downtown Gem investments with contemplated development* as a prudent fiscal investment.

FINDING: Community and Neighborhood Parks create the highest Park Premiums.

- **Implication:** *DPR should continue to celebrate and preserve Community and Neighborhood Parks* as a primary source of real estate value to most Dallasites.

FINDING: When planned as part of a major neighborhood transformation, parks can generate a significant return on public investment.

- **Implication:** *Where applicable, there may be opportunities to explore value capture* -- the use of fiscal benefits associated with park investment to support capital and/or O&M funding of parks.





Economic Value Assessment

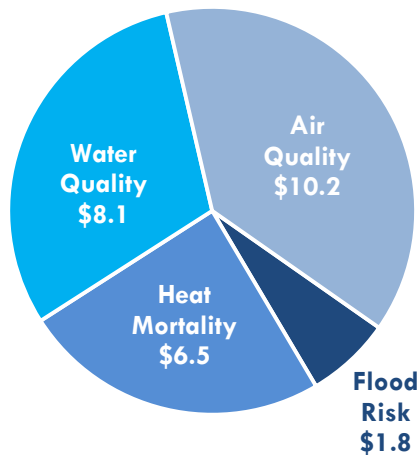
Environment

Image: Trinity River, Texas Audubon

\$26.6M

Annual Value of Park Environmental Value

Figure 7
Total Park-Driven
Environmental Value
(in millions)



OVERVIEW

Parks provide immense Environmental Value through the reduction of heat mortality rates, improvement of walkability, reduction of air pollution and amelioration of water quality. Quantifying the impact of this Environmental Value is critical to understanding the value of the Dallas park system. Future collaboration between DPR and local utilities can enhance the Environmental Value that parks provide.

The HR&A Team found that Dallas parks have an environmental value of approximately **\$26.6 million annually**, comprised of the following four impacts:

- **\$1.8 million in Flood Risk Mitigation**, the capacity to store and infiltrate stormwater runoff, determined by hydrology and individual park characteristics specific to Dallas habitats and climate;
- **\$6.5 million in Heat Mortality Rate Reduction**, an estimate of the overall reduction in temperature and related mortality rates, owed to the tree canopy and green space of the parks.
- **\$8.1 million in Water Quality Improvement and Wetlands Value**,

using a “willingness-to-pay” evaluation based on expected positive impact on the water quality in the receiving stream and its intended use.

- **\$10.2 million in Air Quality and Carbon Sequestration Services**, using estimated quantities of carbon sequestration and air pollution absorption from the parks and trails system combined with the social costs of carbon and air pollution mitigation.

METHODOLOGY

The Environmental Value analysis determined the life cycle costs and benefits related to the environmental performance capacity of three case study parks: Crawford Martin Weiss Park, Northaven Park and Greenbelt and Kiest Park. These parks, representative examples of Community and Neighborhood and Metro and Regional Typologies, were selected and evaluated under existing conditions (“**Baseline Environmental Value**”). Additionally, the HR&A Team examined the tree canopy benefits associated with the Great Trinity Forest as measured by the Texas Trees Foundation. This value is included in each of the above benefit subcategories.

Crawford Memorial Park Annualized Environmental Benefits

Park Typology: Regional/Metro

Total Acreage: 266

25-year Analysis of Environmental Value

Eco-Service Metric	Annualized Value	Annualized Value per Acre
Water Quality/Recreational Use	\$200,000	\$750
Air Pollution/Carbon Sequestration	\$111,000	\$420
Heat Mortality Mitigation	\$73,000	\$270
Flood Risk Mitigation	\$23,000	\$90
Total Value	\$407,000	\$1,530

These parks were then evaluated for opportunities to enhance their aesthetics, and environmental performance through implementation of appropriate green infrastructure strategies (“**Enhanced Green Infrastructure Value**”).

The metrics analyzed for each park in both Baseline and Enhanced scenarios were: capital costs, operation and maintenance costs, water quality, air pollution and carbon sequestration, wetlands value, flood risk mitigation, heat mortality risk mitigation, property value, and recreational value. The latter two metrics are unrelated to environmental value and, therefore, not included in the baseline value, but help to inform

the expected return on investment associated with contemplated green infrastructure investments.

Green infrastructure includes ecologically-enhancing practices such as biofiltration, stream buffers, increased urban canopy, stormwater detention/retention and stream bank restoration. The HR&A Team performed these analyses using AutoCASE, a life cycle cost and benefits economic assessment model. The results of each case study analysis indicate that appropriate levels of green infrastructure implementation provide positive economic, environmental and social benefits.

CRAWFORD MEMORIAL PARK



Crawford Memorial Park is a 266-acre Regional Park located in Southeast Dallas. It features an abundance of valuable natural systems, including Prairie Creek and its associated floodplains and wetlands, which generates an annual Baseline Environmental Value of **\$407,000** and a 25-year NPV of nearly **\$1.1 million**.

Green infrastructure strategies that preserve and enhance the riparian corridor will provide the highest environmental services per dollar invested. The implementation strategy evaluated included 2.5 acres of biofiltration practices, 1 acre of constructed wetlands, and 4 acres of stormwater runoff storage. This strategy has a cost of \$1.1 million and offers total environmental benefits of \$1.2 million over 25 years.

ENVIRONMENT

KEY FINDINGS

Each Typology evaluated provides an average of approximately \$1,200 per acre in Baseline Environmental Value. As a result, larger parks create the highest gross Value. The impact of environmental services provided by a particular park is higher for those parks that feature more tree canopy and stream corridors. Highly managed park spaces generally have more impervious surfaces and less tree canopy and grassed areas and therefore do not perform environmental services at the level of parks with higher performing natural systems.

Across all case studies evaluated, investment in green infrastructure yields a positive return on investment. Each dollar invested in green infrastructure retrofits generates between **\$1.10 and \$3.30** in Environmental Value. The level of investment required to enhance environmental function varies significantly by Typology and the presence of existing natural systems; larger parks and Natural Areas require less investment on a per acre basis than smaller and more densely utilized parks. Likewise, parks with significant Hardware and

Software require more intense green infrastructure interventions. For example, Martin Weiss Park and Kiest Park feature high densities of programmed activities and structures. Their location adjacent to Coombs Creek and Five Mile Creek, respectively, suggest the value of implementation of green infrastructure strategies that (1) restore the creek systems by mitigating impacts of the constructed works by filtering and storing stormwater runoff and (2) increase green space and tree canopy growth.

Parks and open spaces with lower-density programming situated within stream corridors can benefit from an array of lower cost and intensity green infrastructure solutions. Green infrastructure implementation strategies within these Typologies should focus on landscape enhancements and filtration practices within the buffer area to capture and treat stormwater runoff from the surrounding neighborhoods in a manner that draws attention to the natural stream system.

MARTIN WEISS PARK



Martin Weiss Park is a 14.8 acre Community Park located in Southwest Dallas. The park is highly programmed and is located at the headwaters of Coombs Creek, which is a highly erosive stream that meanders through the Oak Cliff area to its discharge point into the Trinity River near downtown Dallas.

The City has invested in the restoration of Coombs Creek; investment in additional green infrastructure strategies including approximately 0.8 acres of biofiltration practices and 0.7 acres of stormwater storage and controlled release to restore Coombs Creek within Martin Weiss Park were evaluated. These interventions would increase the NPV of water quality and flood mitigation services provided by the park by nearly **\$1.2 million.**

NORTHAVEN PARK & GREENBELT



Northaven Park and Greenbelt is a 18.1 acre Neighborhood park located in Northwest Dallas. The park has minimal programming including a few athletic fields, a basketball court and a playground. The park has 8.5 acres of tree canopy, 7.8 acres of lawn and grassy areas and 1.8 acres of impervious constructed works. The majority of the park is situated within the floodplain of Joe's Creek, which is easily accessible from the park. The Baseline Environmental Value of Northaven Park and Greenbelt is \$673,000.

Implementation of green infrastructure strategies including approximately 1.64 acres of biofiltration and stream buffer practices were evaluated. The strategies



should focus on enhancing the aesthetics of the park through appropriate landscape design that also draws more attention to the Joes Creek stream corridor and the efforts to improve its natural system performance through enhanced water quality and habitat.

This level of implementation would increase the NPV of water quality and flood mitigation services provided by the park by nearly **\$1.1 million.**

KIEST PARK



Kiest Park is a 184 acre Regional Park located in Southwest Dallas. The park is highly programmed with athletic fields, loop trails and a recreation center, and has three distinct discharges to the stream corridor.

Five Mile Creek is a major stream corridor that drains highly urbanized areas to the west. Reducing flooding during major storm events within this corridor is not feasible; however, green infrastructure interventions would make a positive impact by reducing erosive discharges and improving the quality of water discharged during smaller and more frequent storm events. These interventions would increase the NPV of water quality and flood mitigation services provided by the park by nearly **\$1.3 million.**

KEY FINDINGS/IMPLICATIONS

FINDING: All of the evaluated typologies generate an average of approximately \$1,200 per acre in Baseline Environmental Value.

- **Implication:** *Investment in tree canopies and stream corridors can yield higher performing natural systems.*

FINDING: Investment in green infrastructure yields a positive return on investment across all typologies.

- **Implication:** *Enhancing existing natural systems to optimize environmental performance can increase the quality and value of ecosystem services provided by parks.*

FINDING: Parks and open spaces with lower density programming situated within stream corridors can benefit from a broader array of lower cost and intensity green infrastructure solutions.

- **Implication:** *Retrofitting parks and open space with green infrastructure will not completely eliminate flooding and water quality impacts related to urbanization but will significantly mitigate some of the impacts while creating value within the surrounding community.*

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Economic Value Assessment

Tourism

Image: State Fair of Texas, Dallas Morning News

\$306M

**Annual Tourism Benefit
Created By Dallas Parks**

11.7M People

**Regional Daytime Visitors
to Dallas Park Assets**

2.4M People

**Non-local Overnight
Visitors to Dallas Park
Assets**

OVERVIEW

Tourism in Dallas park assets creates **\$306 million** in annual economic value in Dallas, which is attributable to three impacts generated by the park system on the tourism economy of Dallas:

- The ability of park assets to attract **regional day visitors** to Dallas. This is approximately **\$53 million** in value. For example, the Dallas Blooms festival at the Arboretum each spring attracts families from a 2-hour or more driving radius.
- The ability of park assets to encourage **overnight visitors to extend their stay** and spend more money in Dallas by adding a park destination to their itinerary. This Value is approximately **\$51 million**. For example, a family visiting Dallas may spend an extra night and morning in town to see the Zoo. For purposes of this analysis, we have conservatively assumed each out-of-region visitor to these assets spends an additional $\frac{1}{4}$ day in Dallas, though visitors may spend as much as an additional $\frac{1}{2}$ day in Dallas or even travel specifically to visit a park or parks.

- **The State Fair of Texas at Fair Park**, which is the single largest component of the Tourism Value generated by parks. It generates approximately **\$202 million** in annual economic value within the City of Dallas, driven by the 2.5 million visitors who attend the State Fair. This includes local employment and other local spending benefits. A third-party update to the economic impact analysis of the State Fair is currently underway.

Additionally, park investments in the Downtown/Arts District area can support the strength of the downtown as a walkable cultural destination, which may support growth in overall visitation to downtown. For example, a visitor to the Sixth Floor Museum at Dealey Plaza and the Perot Museum of Nature and Science might choose to visit those destinations – and perhaps even to visit Dallas – because the walk from the hotel to the museum is pleasantly activated by Main Street Garden, Belo Garden, Klyde Warren Park and other downtown public spaces. Research across the country suggests that downtown and cultural tourists are more likely to be from higher spending age and/or origin segments. Unfortunately, downtown park and destination visitation data is unavailable at a level of granularity that would enable us to accurately test this hypothesis or estimate its benefit.

METHODOLOGY

The Value described above is largely concentrated in two Typologies: (1) Unique Assets, which are unique to both DPR as well as the City of Dallas and attract regional or overnight visitors to special events or programming; and (2) Downtown Gems. Other park assets may generate additional marginal Tourism Value across the city, but this is difficult to quantify. For example, the Dallas Marathon draws over 4,000 racers and hundreds of thousands of spectators, depending heavily on park assets both for staging and the course itself. However, this Value is challenging to disaggregate from the impacts of the road network and existing tourism infrastructure, and is therefore not counted. Our analysis focuses on nine park assets that we believe drive the majority of Tourism Value in the City – four Unique Assets (the Dallas Arboretum and Botanic Gardens, Dallas Zoo, MoneyGram Park, and Fair Park), and five Downtown Gems in Downtown Dallas (Klyde Warren Park, Main Street Garden, Dealey Plaza, Belo Garden and Pegasus Plaza).

This analysis depends on visitation data to each of these assets as available (with

some reliance on visitation data to peer destinations across the country where unavailable), as well as visitor composition and spending data for the Dallas Metroplex as a whole. HR&A employed the IMPact analysis for PLANning (IMPLAN) input-output model for Dallas, created by MIG, Inc. (formerly Minnesota IMPLAN Group, Inc.), to convert these spending levels to economic value. For each dollar of spending in the economy, IMPLAN traces the pattern of commodity purchases and sales between 536 industries within the specified geography. IMPLAN models are used to conduct economic impact analyses by leading public and private sector organizations across the United States.

HR&A utilized comparable State Fairs to estimate the likely impact of the State Fair of Texas within the City of Dallas. Upon determining the median impact per visitor in 2015 dollars, HR&A extrapolated this impact to the 2.5 million annual visitors to the State Fair of Texas. HR&A did not have access to State Fair of Texas visitor spending data. Though a third-party study is underway, it utilizes different methodologies to estimate a single economic impact value that is not limited to benefits within the City of Dallas.



Main Street Garden



Fair Park



MoneyGram Park

DALLAS ZOO



The Dallas Zoo attracts visitors and spending to Dallas from across the region.

Having just celebrated its 125th anniversary in 2013, the Dallas Zoo is the oldest zoo in Texas. Public-private partnerships support the Zoo's success; since shifting to private management in 2009, attendance to the zoo is up by 250,000 -- from 690,000 to 943,000. Increased attendance from the North Texas region drives this growth. With the introduction of pricing options such as Dollar Days (where admission is only \$1) and the popular half-price Wednesday during Spring Break, the Dallas Zoo has become a prioritized destination for regional visitors. The attendance record for half-price Wednesday is 25,800 visitors; the record for Dollar Days is 32,100.

KEY FINDINGS

Park assets are among the top attractions in Dallas. The Metroplex, which includes Dallas, Fort Worth and surrounding cities, had approximately 45 million visitors in 2013, of which approximately 55% were overnight visitors. The City of Dallas attracted 23 million of those 45 million visitors, just over half of the region's total. The Arboretum, Zoo, and Fair Park, all DPR assets, achieved approximately 980,000, 943,000, and 7.1 million visitors in 2014, respectively.

Park assets attract significant regional visitation, and day visitors are highly responsive to programming at their destinations. Zip code data from DPR attractions suggests that many visitors within a short to moderate driving distance travel to Dallas to visit these facilities. Fair Park alone generated 5.8 million day visitors, of which nearly 45% visited the park outside of the State Fair. Based on the availability of data and the need to disaggregate tourism created by parks from tourism created by other drivers, we opted to showcase parks that we believe most visitors are traveling to Dallas for the day with the purpose (in part or in whole) of visiting. Major events, new destinations, and signature exhibits correlate with visitation peaks at many signature destinations regardless of season, as described in the Arboretum case study at right.

DALLAS ARBORETUM



Destination programming at the Dallas Arboretum serves as a key driver of its success. In 2014, nearly 980,000 people visited the Arboretum, exceeding the 2013 total by 250,000, or almost 34%. From 2011 to 2012, visitor attendance increased by 42%. The wildly popular, eight-month Dale Chihuly exhibition and the opening of the Rory Meyers Children's Adventure Garden were large drivers of that growth. Regional visitation to the Arboretum increased in both 2012 and 2013. In those years, only 30% of Arboretum visitors lived in a Dallas zip code. Dallas's agreeable climate allows for a constant rotation of flowers and other plants. Paired with an array of seasonal programming, new plantings help keep the Arboretum fresh and give visitors a reason to return.

DOWNTOWN GEMS



Urban visitor attractions in Dallas have benefitted from public investment in parks and have seen an increase in overall visitation, especially downtown.

Since the \$142 million capital investment in Klyde Warren Park, Main Street Garden and Belo Garden, paired with major annual programs such as the Razzle Dazzle Dallas and City Lights festivals, Downtown Dallas has become noticeably greener and more active.

Dealy Plaza, a National Historic Landmark District, is anchored by the Sixth Floor Museum and generates approximately 315,000 annual visitors 133 different countries. Nearly 65% of visitors to the Museum are from outside of the State of Texas.

Park assets support the success of other investments in tourism. According to a 2014 assessment by Travel Market Report, the most important factor for Tourism value in the immediate future is millennial preference for urban destinations in pursuit of interests and activities. Millennials, and increasingly other demographic cohorts, seek walkable environments supported by parks; as a result, park investments in downtowns can support increases in tourist visitation and spending. This effect is well demonstrated across the country; for example, Chicago's Millennium Park attracts roughly 4 million visitors annually and supports increased visitation to the Art Institute of Chicago and downtown Chicago as a whole.

Park marketing can significantly increase the Tourism Value associated with these assets; unfortunately, few parks have the resources and capacity to market themselves to visitors. DPR has an annual marketing budget of only \$226,000 and one public engagement staff member; marketing is an underfunded departmental priority. As noted in the earlier Benchmarking section, the Peer Set of cities has a median of two marketing staff members and an annual marketing budget of approximately \$340,000.

Even parks that are not major draws for new visitors serve as a welcoming gateway for visitors to the city. The business traveler who goes for a morning run on the new Continental Bridge is graced by an unforgettable view of the Dallas skyline and adjacent Margaret Hunt Hill bridge that can promote a positive impression of the city and encourage that traveler's return. International soccer teams and their fans flock to the new MoneyGram Soccer Park, a 120-acre complex of 19 soccer fields operated by FC Dallas and owned by the City of Dallas. The venue hosts a variety of events including tournaments, soccer clinics, and training sessions that contribute to the City's Tourism value.

TOURISM

FAIR PARK



Enhanced programming and marketing at Fair Park have encouraged an uptick in attendance; additional investment can support the park's long-term success.

Fair Park, a 277-acre fairground and National Historic Landmark southeast of Downtown, is the site for the annual State Fair of Texas—the largest state fair in the nation — and is home to several cultural institutions and the Cotton Bowl. The park itself draws over 2 million visitors annually; the State Fair brings an additional 3 million visitors to the park, making Fair Park the most visited park in Dallas. Fair Park currently runs public service announcements on local radio and television outlets, and publishes ads in area newspapers and through social media channels, for which it expects an ROI of 500-800%.

Fair Park generates significant economic impact in its present form, and effective investment could significantly increase this economic impact. In recognition of this economic opportunity and of importance of Fair Park to Dallas, the City of Dallas has initiated a planning process to define a strategic investment plan for the park's future. This builds upon the Fair Park Master Plan completed by Hargraves Associates in 2003. The City's Task Force produced a preliminary report in April which recommended restoring the historic structures and pursuing public-private management. The report's recommendations were approved by the Dallas Park and Recreation Board in May. HR&A engaged in numerous conversations with DPARD and peer reviewers and concluded that due to ongoing planning for the future use of Fair Park, and its unique impact, the park should occupy its own category.



Esplanade Fountain



Big Tex



Centennial Hall

KEY FINDINGS/IMPLICATIONS

Finding: Park assets are among the top attractions in Dallas, and the State Fair is the single largest driver of Tourism Value.

- **Implication:** Ensure the long-term viability of Fair Park and the State Fair **in a cost-effective manner focused on ROI.**

Finding: Day visitors are highly responsive to programming at their destinations.

- **Implication:** Support increased investment in **frequently updated programming at Unique Assets and destinations.**

Finding: Park assets support the success of other investments in tourism.

- **Implication:** Continue to support investment in **Downtown Gems**, both for capital and operating needs of those parks.

Finding: Park marketing can significantly increase the tourism benefits associated with these assets; marketing may generate a return of as high as \$10 in benefits per \$1 spent.

- **Implication:** Invest more in marketing to boost **attendance, impacts, and earned income for DPR and its partners.**

Finding: Even parks that are not major draws of new visitors serve as a welcoming gateway for visitors to the City.

- **Implication:** **Embrace the Dallas welcoming spirit** in all parks, large and small, with programming, maintenance, facilities, and signage that the City can be proud of.





Economic Value Assessment

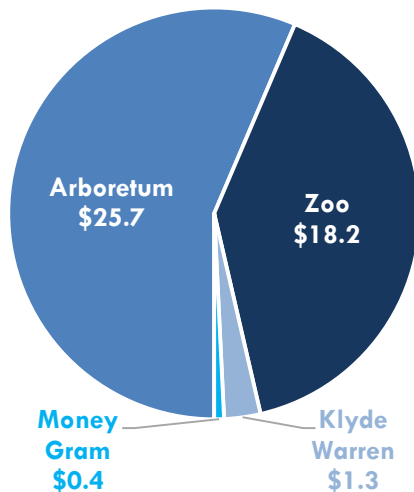
Local Spending and Other Benefits

Image: Stevens Park Golf Course

LOCAL SPENDING & OTHER BENEFITS

\$206M
Of Annual Local Spending
and Other Benefits

Figure 11
Annual Value of Local
Spending Impact by Park
(in millions)



OVERVIEW

DPR and its partners in park management earn income and invest in the development and operations of the park system; this income and investment cycles through the Dallas economy, generating additional jobs and income. In this way, local spending impacts are the “cherry on top” of the well-established benefits of investment in parks. Local Spending and Other Value is **\$206 million per year**. Recreational impacts and volunteerism generate an additional annual value of \$11 million and \$3.5 million, respectively. Local Spending is a recycled benefit; dollars spent in parks could have been spent elsewhere in Dallas. Therefore, this category is not included in the total economic value created by parks.

METHODOLOGY

HR&A estimated the value of local spending impacts by assessing the total annual value of spending in the following categories:

- Park O&M spending by DPR, which was approximately \$73.5 million in 2013;
- DPR capital spending, which was approximately \$39 million in 2013;
- Visitor concessions spending at the Dallas Arboretum and Botanical Garden, the Dallas Zoo, and Klyde Warren Park.
- Total concessions spending across DPR's six golf courses.

Using IMPLAN, HR&A analyzed the value of economic outputs of these categories of spending. The HR&A Team also estimated Recreational Value, assessed using a points-to-dollars system developed by the US Army Corps of Engineers that values open space recreational use enhancement and Volunteerism value using the prevailing wage in Dallas.

KEY FINDINGS

Based on the composition of park earned income and investment and the characteristics of the Dallas economy, each dollar earned by or invested in the park system generates an additional \$1.65+ in spending in the economy. Dallas's uniquely high concession and earned income activity generates significant benefits that can increase with improved utilization of parks. Special events and increased programming, as are offered at the Arboretum and Klyde Warren Park, are particularly potent catalysts of local spending. Targeted investment in meaningful programming and supportive retail amenities will likely spur both increased park visitation and subsequent local spending impacts. Targeted programming will likely also invite a greater amount of community engagement and support through recreational use and volunteerism.

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Economic Value Assessment

City Building

Image: Klyde Warren Park

6,500

**Average Number of New
Workers Added to Dallas
Annually**

1.8%

**City of Dallas
Annual Population
Growth Rate**

1.06M

**Annual Users of
Recreation Centers**

OVERVIEW

Dallas parks are critical infrastructure that sustain the contemporary city and represent a meaningful opportunity for its future. In this section, we qualitatively describe the incredible value that Dallas parks create and can continue to create as:

- **Amenities to attract residents and business** to Dallas; and
- Social infrastructure to **support quality of life for all residents** and an equitable future for all communities.

HR&A has presented this Value using both quantitative and qualitative analytic techniques, including analysis of local socioeconomic trends, Peer Set economic analysis; and economic modeling of select hypothetical scenarios.

METHODOLOGY AND CONTEXT

To describe this Value, the HR&A Team analyzed trends in regional growth and equity in Dallas based on third party data (see References, pg. 62). We added color to the Value opportunity by presenting case studies from other parts of the country indicating how parks can drive City Building and economic growth.

Dallas has benefitted from a number of corporate relocations and expansions, which have helped drive an average of 6,500 new workers each year for the last three years. This growth may be partially attributable to Dallas's high quality of life and open space. Historical corporate relocation data for Dallas indicate that it is a popular relocation destination for small- and medium-sized businesses. Dallas is also a well-known destination for regional headquarters.

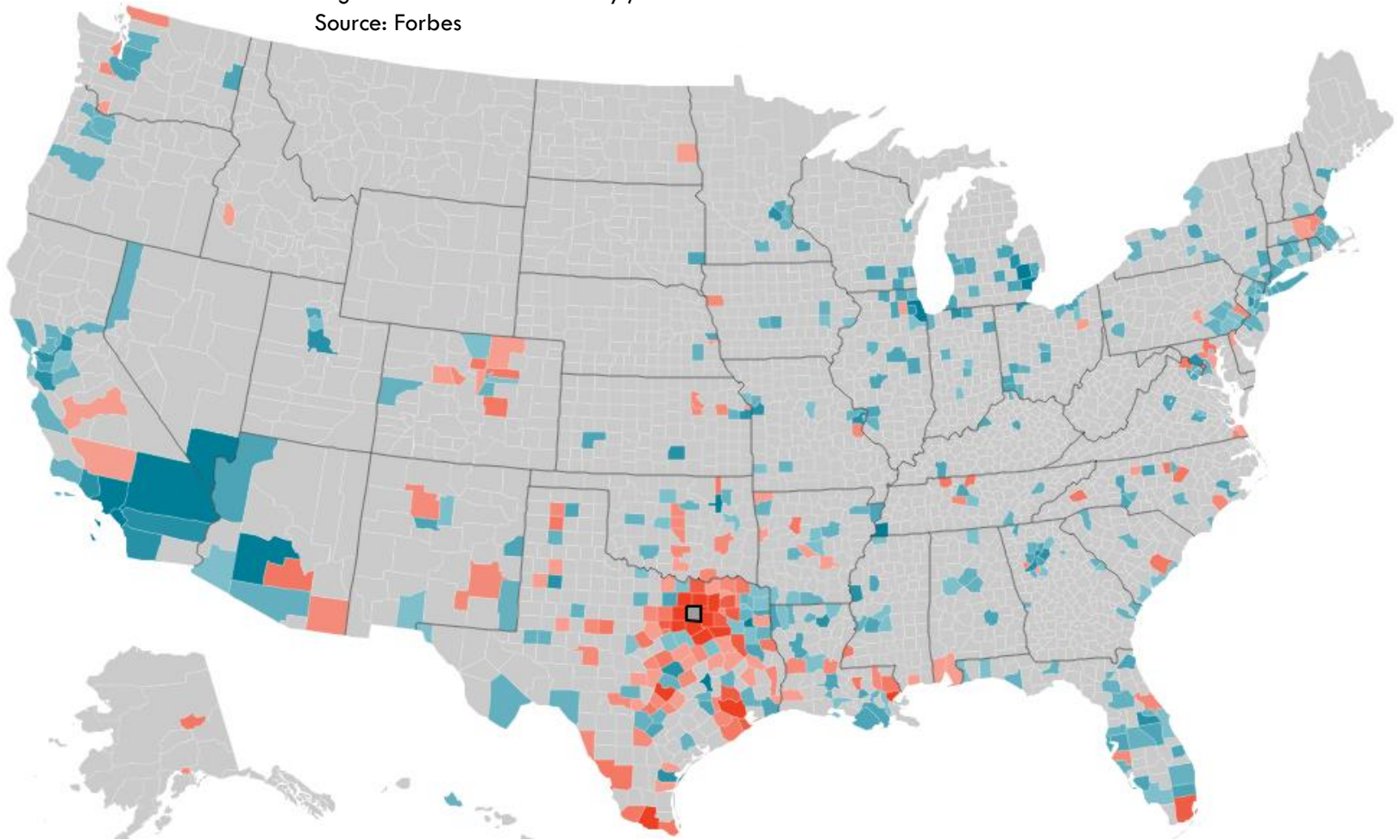
Although the Dallas Metroplex has experienced population growth in recent years, Dallas County has experienced a net loss in population. As indicated in Figure 8, Dallas County attracted residents from across the country in 2010, particularly from the northeast and California. However, it lost more residents than it attracted, the vast majority of whom migrated to surrounding suburban counties or the Houston metro region.

Park offerings may play a role in attracting Dallas emigrants. Some surrounding municipalities spend more per resident on parks than Dallas. Plano, for instance, spends \$125 per resident on its parks each year — just over double Dallas's \$62.

Figure 8: Dallas County Migration in 2010

(blue indicates U.S. counties with net migration into Dallas County; red indicates U.S. counties with net migration out of Dallas County.)

Source: Forbes

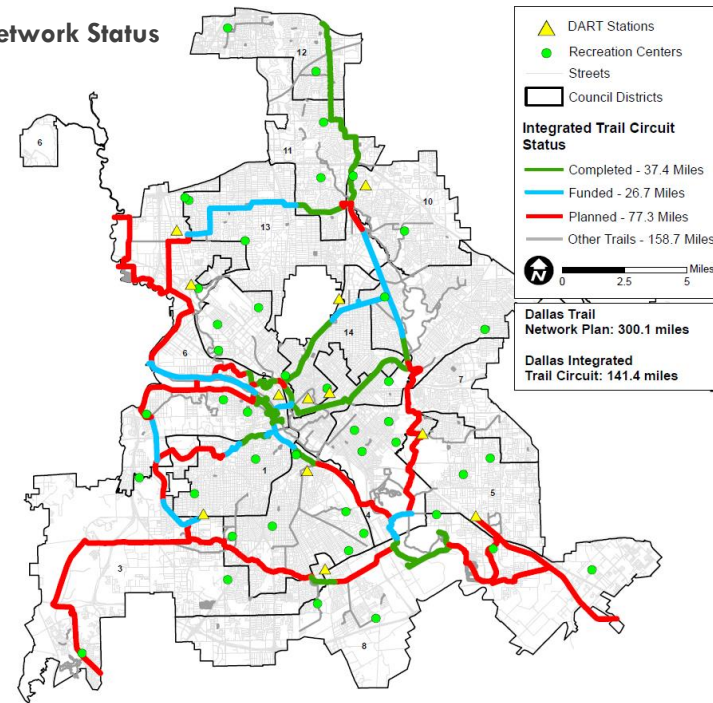


DALLAS INTEGRATED TRAIL CIRCUIT



The success and popularity of the completed 3.5 miles of the Katy Trail demonstrate the importance and potential of a larger, connected trail system. In order to extend the economic and social benefits of trails, the city of Dallas has prioritized the creation of an Integrated Trail Circuit that aims to link many of the individual trails throughout Dallas. To close the gaps among the existing trails, more than 150 miles of new trails must be built – at an estimated cost of \$140 million. As indicated by the significant permanent wealth generated along the Katy Trail, a substantial investment in the Integrated Trail Circuit would likely result in a strong return on investment and could generate substantial fiscal benefits for the City. The network of trails – approximately 300 miles long once complete – promises an additional boon in that it will connect North and South Dallas, providing more equitable access to the public health and environmental benefits linear parks provide.

Figure 9: Trail Network Status



Similarly, Frisco and Arlington spend \$75 and \$86 per resident, respectively.

communities.

While we recognize that there are a number of factors that make living in these communities particularly attractive, their park spending levels arguably play a role.

Dallas also experiences meaningful differences in employment, income, and educational attainment among communities (see Table 6 for detail). Park amenities are particularly critical in otherwise underserved

Dallas parks are a valuable amenity to residents and businesses. Local economic development experts cite Trails as among the most appealing assets to future residents and businesses. Amenities play an important role in talent attraction and retention. Notably, technology and creative services companies have identified amenities as the single most important factor in deciding where to locate their businesses.

THE HIGH LINE



New York City's High Line has been a boon for growth and development in the Chelsea neighborhood of Manhattan, attracting new and growing employers such as Google to the formerly industrial district. The High Line, which opened in 2009 and has since been expanded, has successfully attracted billions of dollars of investment and development in Chelsea. In 2010, Google spent \$2 billion to acquire a nearly 3 million SF office building two blocks from the High Line for its New York City headquarters. Soon thereafter, the company signed new leases for 180,000 SF of additional office space immediately next to the High Line and is expected to double the size of its leased space by late 2015 or early 2016.

Dallas lacks the geological variety of many of the cities from which it draws new residents (e.g. San Francisco, Seattle), and the recreational amenity of the trail system is an important asset and offset. By this standard, the proposed Integrated Circuit Trail represents a significant opportunity to magnify the recreational options afforded by the trail system and attract new recreational users.

A number of factors contribute to inter-regional migration patterns, but quality amenities such as parks appear to contribute substantially to the level of private investment and motivation to migrate *within a region*. Between 2010 and 2014, the City of Dallas grew by 1.8% per year to 1.25 million residents. Its population is expected to grow to 1.3 million residents by 2019. If improved park amenities could help Dallas grow its population base 10% faster than expected, it could see as many as 5,000 additional new residents by 2019, representing a potential economic value of hundreds of millions of dollars over the following decade.

SOUTH LAKE UNION



Seattle's existing and planned urban parks have played a critical role in one of the most important corporate expansions of the century. The South Lake Union district of Seattle, once a desolate collection of historic warehouses just north of the city's central business district, became the headquarters of Amazon, a large and rapidly growing e-commerce company. Amazon consolidated its offices to the district in 2007, only seven years after the groundbreaking of Lake Union Park, a 5-acre, well-programmed waterfront park. By 2019, Amazon will have 40,000 workers in the district earning nearly \$3.8 billion in salaries and with a retail spending potential of \$722 million.

DISCOVERY GREEN, HOUSTON



Downtown Houston has started to transform into a live/work/play destination since the completion of Discovery Green, with \$625 million in new development completed and an additional \$1 billion in the pipeline. Since opening to the public in 2008, Discovery Green has become a keystone amenity for Downtown – along with the longer-term, \$80 million Buffalo Bayou project. Discovery Green generates approximately 1.2 million annual visitors, of which nearly 25% come from suburban and other surrounding areas. The One Park Place Tower opened adjacent to the park in 2009 with 346 new residential units, and Hess consolidated its Houston operations in the adjacent Hess Tower (formerly Discovery tower) in 2011.

In the past three decades, New York City has undergone a generation of major park system investment and advancement. The City advanced over \$1 billion of park projects, including the High Line, Brooklyn Bridge Park, Hudson River Park and Governor's Island. These investments have coincided with the largest sustained post-industrial population increase after decades of decline, and the City now has its largest ever population.

Parks create not only economic value, but also essential social value for diverse communities across Dallas.

These assets are particularly crucial where private recreational facilities are limited, as in the less affluent communities in south Dallas. Dallas's park assets are distributed throughout the city, varying from two acres per 1,000 residents in wealthier districts to over 20 acres per 1,000 residents in less affluent districts. Data from Recreation Centers citywide also suggest that the DPR assets in low-moderate income communities are more heavily used than in affluent communities.

Partnerships in diverse communities can support park equity. Across the

country, Downtown Gems that benefit from public-private partnerships and private resources are concentrated in affluent communities. Dallas is no exception, and its high reliance on private resources to sustain the park system may exacerbate this trend. Nonetheless, Dallas has many notable partnerships that bring life to exceptional Community Parks in low-moderate income communities including the Trinity River Audubon Center and the Texas Horse Park.

Over the long term, park investment can prove to be critical to re-stitching divided communities and supporting a unified and economically vibrant Dallas. According to the Brookings Institute, Dallas is ranked 11th in income inequality among the 50 largest cities in the U.S. This inequality is exacerbated by low population density that results in low transit access despite a far-reaching mass transit system in the Southeast. New amenities for low-moderate income communities can bridge the socioeconomic divide and celebrate the diversity of Dallas.

TABLE 6: Park Amenities by Council District*(Sorted by Average Household Income)*

Council District		Number of Parks	Total Park Acreage	2010 Population	Park Acreage / 1,000 Residents	Capital Needs
1	Kessler, Wynnewood North	23	1,106	80,100	14	\$29,760,000
2	Stemmons Corridor, Downtown	40	1,710	70,700	24	\$55,520,000
3	Redbird, Mountain Creek	34	2,018	98,900	20	\$43,550,000
4	Cedar Crest, Five Mile Creek	34	6,167	85,700	72	\$28,830,000
5	Pleasant Grove, Piedmont Addition	27	2,120	89,700	24	\$25,440,000
6	West Dallas, Korea Town	34	1,855	74,300	25	\$26,280,000
7	South Dallas, Buckner Terrace	38	2,008	74,700	27	\$35,700,000
8	Highland Hills	26	1,383	96,600	14	\$49,470,000
9	Lakewood, Casa View	25	1,730	88,000	20	\$17,900,000
10	Lake Highlands	23	1,028	79,600	13	\$11,050,000
11	Northwood Hills, North Dallas	18	333	85,200	4	\$13,970,000
12	Far North	16	221	94,600	2	\$15,190,000
13	Preston Hollow, Bluffview	23	445	80,900	6	\$16,730,000
14	Oak Lawn, Downtown	44	191	98,700	2	\$12,360,000
Citywide						\$2,535,160,000
Total			23,249	1,197,700		\$2,916,900,000

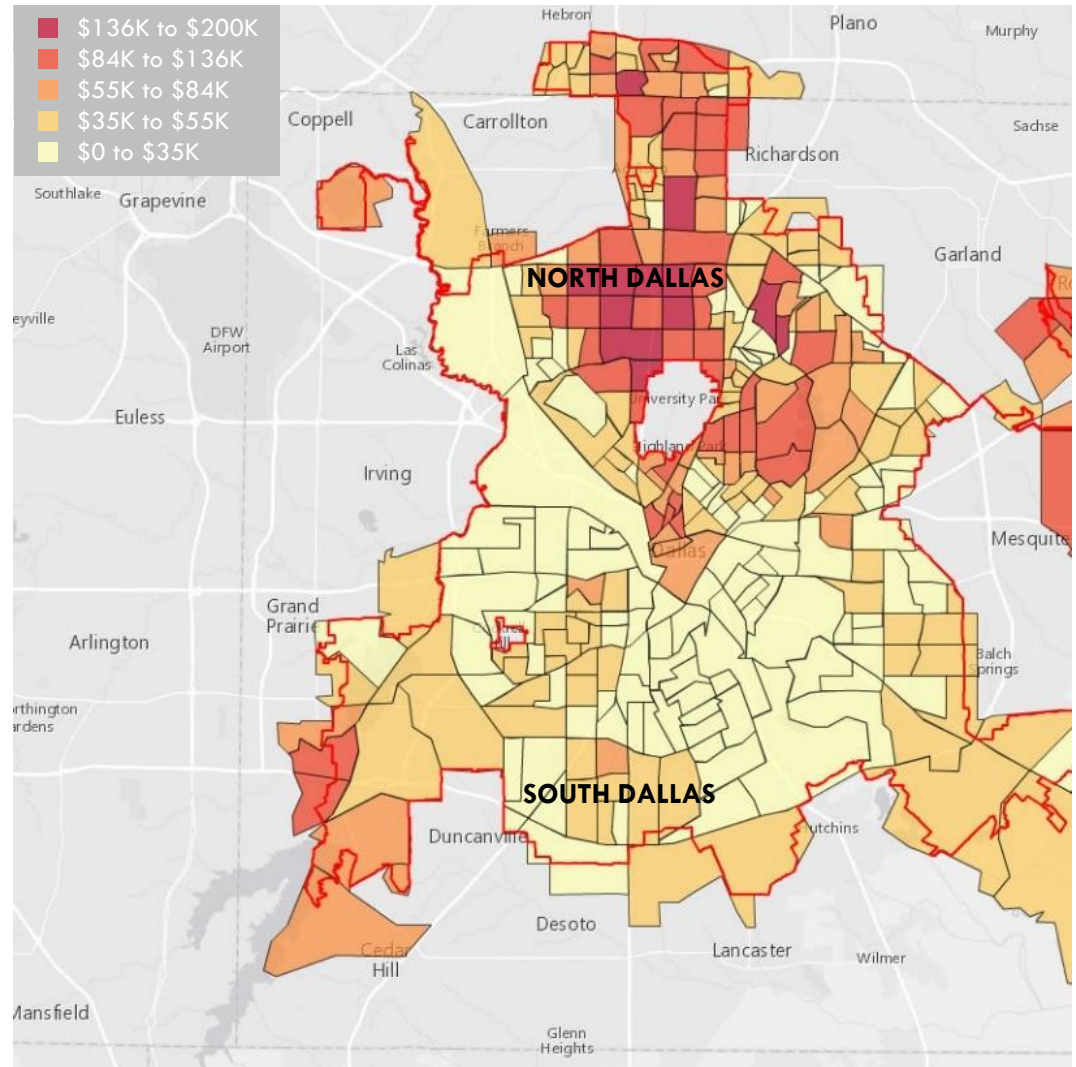
NOTE: The Trinity River Greenbelt and Great Trinity Forest stretch across Council Districts 1, 2, 4, 6, 7, and 8. An additional 3 parks, Samuell-East (Regional, 610 acres), Samuell-New Hope (Metro, 120 acres), and Simonds Lake (Metro, 206 acres), have been excluded from this table because they are located outside of city limits.

PARK IN THE WOODS



Park in the Woods is an exemplary public-private partnership in an underserved community. In 1974, DPR signed an agreement with the Dallas Power and Light Corporation – today known as Texas Utilities – to purchase 25 acres of land at a cost of \$1. This land was used to create Park in the Woods, which opened in 1981. In 2004, DPR built a recreation center within the park that features a baseball field, fitness center, gymnasium, playground, basketball, volleyball, tennis courts, a kitchen and a conference room for meetings. The recreation center includes children’s afterschool/summer programs and continuing education/workforce training programs for adults. Park in the Woods has approximately 1,500 annual users.

Figure 10: Household income by Census Block Group, 2015



TRINITY RIVER AUDUBON CENTER



The Trinity River Audubon Center, once an illegal dump site, is now a vibrant outdoor and educational destination. Prior to its reclamation, the site of the Center was polluted with 1.5 million tons of hazardous compounds and debris deposited over a 15-year period.

The City of Dallas reclaimed 120 acres of the river corridor and initiated a \$25 million environmental remediation process. The Trinity River Audubon Center now features a new 21,000 square foot facility with educational programming for children and adults, event spaces, and access to four miles of hiking trails. The Center receives approximately 50,000 visitors per years.

The efforts of DPR and its partners have proven that blights can become assets with focused investment. These assets can in turn support community function and attract new investment including new housing, businesses or community facilities.

For example, through a \$25 million remediation effort, the City of Dallas transformed an illegal dump site into the vibrant Trinity River Audubon Center.

TRINITY RIVER CORRIDOR



The planned Trinity River transformation could reposition a current floodway as a destination to unite the City across its major northwest/southeast seam. The Balanced Vision Plan for the Trinity River Corridor, approved by City Council in 2002, calls for three phases of flood protection, environmental restoration, creation of park space, and transportation improvements.

The Trinity Trust currently operates programming within the park that attracts thousands of annual visitors. A high quality transformation could attract millions of community and out-of-region visitors. Investment in the Trinity River Corridor could also catalyze new real estate development – soft sites on both sides of the river could support billions of dollars of real estate development over the next generation.

KEY FINDINGS/IMPLICATIONS

Finding: Dallas parks are a valuable amenity to both current and future residents and businesses. Trails may be the most appealing typology to future residents and businesses.

- **Implication:** Support investment in a **connected trail system** that serves existing residents and attracts the residents and businesses of the future.

Finding: A modest increase in the current inflow of relocating workers and businesses to Dallas each year could yield significant economic value.

- **Implication:** Continue to **foster the green vitality of the urban core**.

Finding: Parks may contribute substantially to the level of private investment and motivation to migrate *within* the region.

- **Implication:** Invest in **residential-serving amenities** such as community parks, trails, dog parks, and playgrounds.

Finding: Parks create essential social value for diverse communities across Dallas.

- **Implication:** Maintain and expand community park and recreation center **programming and investment** in these communities.

Finding: Partnerships in diverse communities can support park equity.

- **Implication:** **Expand relationships and partnerships** with community organizations such as the Dallas Parks Foundations, as well as private entities for investment in parks, particularly in **less affluent areas of Dallas**.

Finding: The efforts of DPR and its partners have proven that blights can become assets with focused investment.

- **Implication:** Identify opportunities for **transformative investment and park creation** resulting in new private investment in business and resident attraction.

Finding: Park investment can be critical to re-stitching divided communities and supporting a unified and economically vibrant Dallas.

- **Implication:** Utilize park assets to **bridge social gaps** and improve **the well-being of all Dallasites**.

Willis Winters

Director, City of Dallas
Department of Park and
Recreation

Reginald V. Hurd

District Manager
Dallas Park & Recreation
Department

Ryan O'Connor

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Fair Park Administration

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President & CEO
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Executive General Manager
Fair Park Administration

Mary Brinegar

President & CEO
Dallas Arboretum & Botanical
Garden

Brent Brown

Director
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Robin Baldock

Executive Director
Friends of the Katy Trail

Ted Ellis

President
The White Rock Lake
Foundation

William Evans

CFO
Dallas Zoo Management, Inc.

Tara Green

President
Klyde Warren Park

Craig Holcomb

Executive Director
Friends of Fair Park, Trinity
Commons Foundation

Jimmy Smith

CFO
FC Dallas

Samuel Stiles

Director
Dallas Parks Foundation

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Mark D. Thompson

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Suzanne Farren

Keller Williams Realty

Sheena Gohil

Colliers International

Brent Christopher

Communities Fdn of Texas

Robert Decherd

Belo Foundation

Larry Good

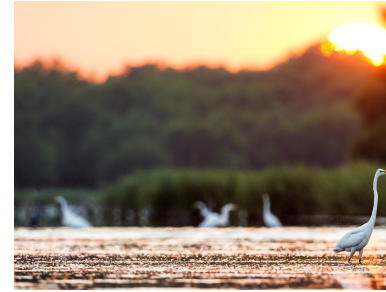
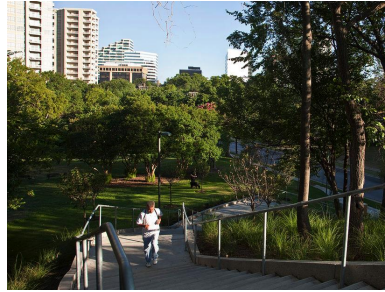
Good, Fulton, Farrell

Scott Beck

CEO
Beck Ventures

Bruce Bradford

President
North Dallas Chamber of
Commerce



Economic Value and Benchmarking Assessment
of the Dallas Park System
FEBRUARY 2016